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ABSTRACT

Presented are statistical data from the Annual Survey of Scientific and Engineering Expenditures at Universities and Colleges, FY 1983. These data represent science and engineering (SE) expenditures for separately budgeted research and development (R&D). The phrase "separately budgeted R&D expenditures" refers to current fund expenditures designed to produce specific research outcomes and are sponsored either by an external agency to an institution or are separately budgeted by an internal unit of an institution. The data are presented in 72 tables under such major headings as: separately budgeted R&D expenditures (by year and source of funds and character of work, fiscal years 1953-1983); summary of separately budgeted R&D expenditures by source of funds, character of work, and SE field; R&D expenditures classified by institutional category (including those at historically black colleges) by source of funds, character of work, and SE field; geographic distribution of separately budgeted R&D expenditures; R&D expenditures by individual SE field and selected subfields in descending order of amounts, by institutions; capital expenditures for facilities and equipment for research, development, and instruction; and R&D expenditures at university-administered federally funded research and development centers by character of work and SE field. (Technical notes and survey instruments used are included.) (JN)

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Academic Science/Engineering: R&D Funds, Fiscal Year 1983 (Detailed Statistical Tables)(NSF 85-308), 1985.

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To obtain accurate historical data, use only the latest detailed statistical tables for FY 1983 (NSF 85-308) and not data published earlier. Institutions revise prior-year data when important changes occur in reporting practices and program classifications, and only the latest tables incorporate such changes.

general notes

This report contains tabular data compiled from the National Science Foundation's (NSF's) annual Survey of Scientific and Engineering Expenditures at Universities and Colleges, FY 1983. The analyses of results of this survey are published in a *Science Resources Studies Highlights* (NSF 85-306).

These data refer to science and engineering (S/E) expenditures for separately budgeted research and development. Terms used in institutional accounting procedures are incorporated throughout the tables.

The term "separately budgeted research and development (R&D) expenditures" refers to current fund expenditures that are designed to produce specific research outcomes and are funded either by an external agency to an institution or are separately budgeted by an internal unit of an institution. The term "expenditures" differs from the Federal accounting term "obligations." Expenditures are funds actually spent by an institution during its fiscal year; obligations are funds designated for the reporting institution during the Federal fiscal year, regardless of when the recipient institution may actually spend the funds. Capital expenditures for S/E facilities and equipment for research, development, and instruction are reported separately from research equipment purchased under separately budgeted project awards. Capital expenditures for R&D equipment may include fixed or movable furnishings and scientific equipment, facilities ancillary or integral to R&D efforts, or special separate facilities to house S/E apparatus. Such expenditures may also refer to any article of nonexpendable tangible personal property having a useful life of more than two years and an acquisition cost of $500 or more per unit as described in Office of Management and Budget (OMB) Circular A-21, revised June 1982. Separately budgeted R&D equipment purchased from current funds includes all research equipment purchased under sponsored research project awards.

Federally funded research and development centers (FFRDC's) are R&D-performing organizations which range from the traditional contractor owned/contractor-operated or Government-owned/contractor-operated (GOCO) organizational structures to various degrees of contractor/Government control and ownership. These organizations are formed to meet a particular R&D objective which cannot be met as effectively by existing resources.

Tabulations are presented for "doctorate-granting" institutions in two ways in this report. The first is based on the conventional degree-level distinction--doctorate, master's, bachelor's, and no S/E degree. Most of the data on doctorate-granting institutions shown in this report are distributed according to this conventional classification system. A second system developed by the National Center for Education Statistics (NCES) uses the "doctorate-granting" institutions category in reference to institutions characterized by a significant emphasis on doctorate-level education, as measured by the number of doctorate recipients and by the diversity in doctorate-program offerings. The number of institutions included under the conventional "doctorate-granting" category is 323; the number included under the NCES category is 165.

Four additional categories of institutions appear in the NCES classification system: "Comprehensive," "general baccalaureate," "professional and specialized," and "2-year." "Comprehensive" institutions are characterized by a strong, diverse postbaccalaureate program but are not typically involved in doctorate-level education. "General baccalaureate" institutions are primarily engaged in general undergraduate, baccalaureate education. "Professional and specialized" institutions may be baccalaureate or postbaccalaureate and are characterized by a significant level of specialization in one area, usually a professional field such as business or engineering. "Professional and specialized" schools are listed as one of the following: Dentistry; medical; other health; engineering; business and management; art, music and design; law; education; U.S. service; and other specialized or professional. "Two-year" institutions confer over three-fourths of their degrees for two years of study.

The terms "imputation" and "imputed data" refer to the computerized process of developing estimates of data that were not furnished by the institutions concerned when statistics were requested. This process develops estimates based primarily on key data items reported in prior-years' surveys when available; when not available, estimates were based on figures derived according to peer respondent institutions' characteristics, which in turn are based on highest degree granted and type of institutional control--public or private. Corresponding items are increased or decreased to reflect similar growth or shrinkage reported by peer institutions. In this publication the letter "I" is used to identify imputed data and the letter "E" is used when respondent institutions indicated that their data were estimated or when data required slight adjustments to distribute evenly.

Data from the current-year's tables should be used in reviewing historical information in this survey. Data presented in trend tables are assembled from the most recently completed survey cycle. Since prior-years' data are reviewed for consistency with current-year's responses and, when necessary, revised in consultation with institutional respondents, references to prior-years' data should be restricted to this document.

Response to this survey is entirely voluntary. Requests for additional information concerning the survey findings for the current or prior surveys should be directed to Ms. Judith F. Coakley or Mrs. Marge Machen at the following address:

Universities and Nonprofit Institutions Studies Group
Division of Science Resources Studies
National Science Foundation
Washington, D.C. 20550
(202) 634-4673

section a

technical notes

the universe

The universe for this survey includes 562 institutions in the United States and outlying areas having science and engineering (S/E) academic programs that offer a doctorate or a master's degree in those fields, as well as those schools with $50,000 or more in separately budgeted research and development (R&D) expenditures. In addition, the universe includes 19 federally funded research and development centers (FFRDC's). To qualify as a unit in this category, the FFRDC must be engaged in basic or applied research, development, or management of R&D activities and the results must be directly monitored by the Federal Government, usually a single agency, in a relationship expected to be maintained on a long-term basis. The activity is operated, managed, and/or administered by either a university or consortium of universities as an autonomous organization or as an identifiable separate operating unit of its parent institution. The majority of the activity's financial support, 70 percent or more, is received from the Federal Government. In general, most or all of the facilities are owned by the Government or funded, under contract, by the Government. Data from the 19 FFRDC's are presented separately in this report. Copies of both institutional and FFRDC survey forms (NSF form 411) used in the 1983 survey are included in section D, presenting survey results in aggregate form.

The survey population was reviewed prior to the mailout of the questionnaires to ensure that each institutional classification was accurate. Characteristics of the schools were reviewed before and during the course of the survey to determine if changes had occurred (i.e., reviewed for changes in highest degree granted or for school openings, closings, or mergers). Names of institutions newly added to the *Education Directory, Colleges and Universities, 1983-84*[1] were reviewed to determine their eligibility for inclusion in this survey.

the survey instrument

The questionnaire used in the fiscal year (FY) 1983 survey was virtually unchanged from that used in prior years. A "crosswalk," now a standard part of the survey package, was added in 1981 to assist respondents in matching the S/E fields requested in the expenditures survey with the field codes devised by the National Center for Education Statistics (NCES) of the Department of Education. The NCES field codes are published in *A Classification of Instructional Programs* (NCES 81-323). To complete this survey, most institutions have incorporated the essential information into their recordkeeping systems, thereby ensuring a consistent format from one year to the next. Such consistency yields more useful statistics over time. As a rule, information to complete this instrument is found within the institution's year-end accounting records.

The survey questionnaire consisted of four main items:

Item 1 requested institutions to report their total current expenditures for separately budgeted S/E research and development by source of funds and to indicate the percentage of the total and the federally financed portion that is considered basic research. Care should be observed when interpreting data on sources of funds; for example, industry R&D support is limited to grants and contracts for R&D activities from profit-making organizations, but the total reported excludes research funded through unrestricted accounts and from corporate foundations, endowments,

[1]Department of Education, National Center for Education Statistics, *Education Directory, Colleges and Universities, 1983/84* (NCES 84-300) (Washington, D.C.: Supt. of Documents, U.S. Government Printing Office.)

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and fellowships to students. (Further information on academic research and development supported by industry may be obtained from the 14th annual National Science Board report.)[2]

Item 2 asked for total and federally financed current fund expenditures for separately budgeted R&D activities, by detailed S/E fields. Data in subdisciplines of engineering and environmental sciences, which were requested on an optional basis in 1980, have become a standard part of the survey form since 1981. By refining the data on these two disciplines, the results can be integrated with the findings from several other National Science Foundation (NSF) surveys of academic resources where data on these detailed fields have been collected routinely.

Item 3 requests institutions to report that portion of total and federally financed current fund expenditures reported in items 1 and 2 that went for the purchase of research equipment. This includes all research equipment purchased under sponsored research project awards from current fund accounts for separately budgeted research and development and disbursed in the same detailed disciplines as in item 2. These data are of special interest to Federal policymakers in determining current funding levels for scientific instrumentation. In recent years, reports concerning academic instrumentation shortages and obsolescence were based largely on anecdotal information. In an effort to obtain well-grounded data on the extent of research equipment expenditures, item 3 was added as an optional item to the R&D expenditures survey in 1979. By 1982, survey respondents at most institutions had indicated their ability to provide item 3 data more readily, since their recordkeeping systems were being refined in response to Office of Management and Budget (OMB) Circular A-21, revised; therefore, item 3 has become a standard part of the survey instrument.

Item 4 provides data on capital expenditures for facilities and equipment (as defined in Section J.13 of OMB Circular A-21, revised) for research, development, and instruction by broad S/E field, showing amounts from Federal and other sources. A more detailed breakdown of capital expenditures data separating S/E facilities and equipment for R&D activities from those devoted to instruction is not readily available in most institutions' records. The classification systems and the methods used to capture data for item 4 differ widely among institutions; therefore, caution should be exercised when interpreting these data. For example, some institutions have explained to NSF that they can use data on space allocations to estimate capital R&D expenditures. Some institutions classified equipment and facilities used by undergraduates as "instructional" and those used by graduate students as "research." Most institutions contacted have indicated difficulty in separating capital R&D spending from instruction. By including both capital expenditures and current fund expenditures of S/E funds devoted to R&D activities, the survey provides a comprehensive summary of such activity at each institution in the survey. This is an important component of statistical information needed by financial and budgetary decisionmakers in policy analyses.

the response rate

The survey questionnaires were mailed in November 1983. By the survey closeout date in late June 1984, 438 completed forms had been received from universities and/or colleges out of the original universe of 562, a 78-percent response rate; completed forms were received from all 19 FFRDC's. The overall institutional response rate in 1983 was 3 percentage points below that of the 1982 survey. (Table A-1 shows the distribution of institutional responses by degree level.) The highest response rate in 1983, 86 percent, was from doctorate-granting institutions, where 98 percent of the R&D expenditures in S/E fields was disbursed. Response rates of institutions granting a doctorate degree dropped 5 percentage points in 1983; responses from master's and undergraduate institutions remained about the same as in 1982. The majority of respondent institutions, however, were schools with the largest R&D programs, so the effect of the lowered response rate is considered minimal.

Table A-1. R&D expenditures survey response rates by type of institution: FY 1983

Highest degree granted	Number surveyed	Number of respondents	Percent of total
Total	562	438	78.0
Doctorate	323	278	86.1
Master's	175	122	69.7
Bachelor's and no science/engineering degree	64	38	59.4

SOURCE: National Science Foundation

In order to provide national totals of academic R&D expenditures, it was necessary to develop estimates for the approximately 22 percent of the survey population that did not respond. This process, referred to as "imputation," has been used consistently since 1976. The combined imputed and estimated amounts totaled $958 million for academic R&D expenditures, or 12 percent of the $7.7 billion universe total, as shown in table A-2. Even though the imputation/estimation rates increased in 1983 and the overall institutional response rate fell, R&D expenditures reported by those institutions that did respond represented most of the R&D expenditures grand total.

Table A-2. R&D expenditures survey imputed and estimated amounts by type of institution: FY 1983

[Dollars in millions]

Highest degree granted	Separately budgeted R&D expenditures	Amount imputed and/or estimated	Percent of total
Total	$7,745	$958	12.4
Doctorate	7,610	895	11.8
Master's	109	48	44.0
Bachelor's and no science/engineering degree	26	15	57.7

SOURCE: National Science Foundation

[2]See National Science Board's 14th annual report, *University/Industry Research Relationships: Myths, Realities, and Potentials* (Washington, D.C.: Supt. of Documents, U.S. Government Printing Office, 1983).

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Table A-3 presents imputed and estimated rates for nonresponse in the 1983 survey in the broad S/E disciplines. The dollar amount imputed or estimated is displayed along with the percentage it represents of all institutional totals in a particular discipline. The amounts imputed or estimated in the source-of-funds categories and the percentage of all institutional totals are shown in table A-4. The imputation rates in tables A-3 and A-4 are evidence of the acceptable quality of data reported and the increasing care addressed by respondent institutions in providing usable data in the survey.

It should be evident that, as in all surveys, the quality of the end product depends on the respondents' ability to provide viable data. If information is not complete at the time of the survey, the respondent may find it necessary to provide only what is available. In that case, revision of earlier years' data is a strengthening action.

Every effort is made to maintain close contact with respondents in order to preserve the consistency and continuity of the resultant data. NSF carefully examined the completed 1983 questionnaires upon receipt. A computerized facsimile of the survey form was then prepared for each institution, depicting a 3-year comparison of its responses to each item, including the current-year's data, and noting substantive disparities, if any. The facsimiles were mailed to all doctorate institutions and to all other institutions requiring corrections so that updating could be accomplished by the institutions before the final processing and tabulation by the contractor.

Table A-3. R&D expenditures survey imputed and estimated amounts by field: FY 1983

[Dollars in millions]

Science/engineering field	Separately budgeted R&D expenditures			Federally financed R&D expenditures		
	Total	Amount imputed and/or estimated	Percent of total	Federal	Amount imputed and/or estimated	Percent of total
Total	$7,745	$958	12.4	$4,960	$608	12.3
Engineering	1,101	192	17.4	735	130	17.8
Physical sciences	890	206	23.1	699	102	14.5
Environmental sciences	618	109	17.7	427	73	17.1
Mathematical sciences	101	25	24.8	75	18	23.9
Computer sciences	177	41	23.4	129	37	28.6
Life sciences	4,210	673	16.0	2,569	325	12.7
Psychology	137	24	17.4	91	13	14.1
Social sciences	346	69	19.8	149	22	14.5
Other sciences	165	32	19.4	83	18	21.0

SOURCE: National Science Foundation

Table A-4. R&D expenditures survey imputed and estimated rates by source of funds: FY 1983

[Dollars in millions]

Source of funds	Separately budgeted R&D expenditures		
	Total	Amount imputed and/or estimated	Percent of total
Total	$7,745	$958	12.4
Federal Government	4,960	608	12.3
State and local governments	599	59	9.8
Industry	370	35	9.4
Institutional funds	1,231	121	9.8
All other sources	585	109	18.6

SOURCE: National Science Foundation

Institutions included in the R&D survey are given the opportunity to correct prior-years' data when necessary. When updated or amended figures covering past years are submitted by a respondent, trend data are correspondingly changed by NSF. Similarly, if a respondent institution undergoes an organizational change, such as a merger, NSF incorporates the effects of such changes into prior-year's data where possible in order to preserve the comparability and consistency of the data series.

For detailed studies of individual institutional responses, the 1983 data tapes may be obtained by requesting a *Data User Guide* from the address indicated in the general notes; or, refer to table B-27 in section B.

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(DOLLARS IN MILLIONS)

FISCAL YEAR	TOTAL	FEDERAL GOVERNMENT	STATE AND LOCAL GOVERNMENTS	INDUSTRY	INSTITUTIONAL FUNDS	ALL OTHER SOURCES
1953	255	138	37	19	35	26
1954	290	160	42	22	38	28
1955	312	169	47	25	41	30
1956	372	213	53	29	43	34
1957	410	229	60	34	49	38
1958	456	254	68	[illegible]	53	42
1959	526	306	76	[illegible]	58	47
1960	646	405	85	[illegible]	64	[illegible]
1961	763	500	95	[illegible]	70	[illegible]
1962	904	613	106	40	[illegible]	[illegible]
1963	1,081	760	118	41	89	73
1964	1,275	917	132	40	103	83
1965	1,474	1,073	143	41	124	93
1966	1,715	1,261	156	42	148	108
1967	1,921	1,409	164	48	181	119
1968	2,149	1,572	172	55	218	132
1969	2,225	1,600	197	60	223	145
1970	2,335	1,647	219	61	243	165
1971	2,500	1,724	255	70	274	177
1972	2,630	1,795	269	74	295	187
1973	2,884	1,985	295	84	318	202
1974	3,023	2,032	307	96	370	218
1975	3,409	2,288	332	113	417	259
1976	3,729	2,512	364	123	446	285
1977	4,067	2,726	374	139	514	314
1978 1/	4,625	3,059	414	170	623	359
1979	5,361	3,595	470	194	728	374
1980	6,060	4,094	494	237	827	409
1981	6,818	4,559	548	291	974	446
1982	7,261	4,749	593	330	1,088	500
1983	7,745	4,960	599	370	1,231	585

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
SOURCE: NATIONAL SCIENCE FOUNDATION

BEST COPY AVAILABLE

TABLE B-2. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY YEAR AND CHARACTER OF WORK: FISCAL YEARS 1953-83

(DOLLARS IN MILLIONS)

FISCAL YEAR	TOTAL	BASIC RESEARCH		APPLIED RESEARCH AND DEVELOPMENT	
		AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL
1953	255	110	43.1%	145	56.9%
1954	290	136	46.9	154	53.1
1955	312	159	51.0	153	49.0
1956	372	200	53.8	172	46.2
1957	410	240	58.5	170	41.5
1958	456	281	61.6	175	38.4
1959	526	343	65.2	183	34.8
1960	646	433	67.0	213	33.0
1961	763	536	70.2	227	29.8
1962	904	659	72.9	245	27.1
1963	1,081	814	75.3	267	24.7
1964	1,275	1,003	78.7	272	21.3
1965	1,474	1,138	77.2	336	22.8
1966	1,715	1,303	76.0	412	24.0
1967	1,921	1,457	75.8	464	24.2
1968	2,149	1,650	76.8	499	23.2
1969	2,225	1,711	76.9	514	23.1
1970	2,335	1,796	76.9	539	23.1
1971	2,500	1,914	76.6	586	23.4
1972	2,630	2,022	76.9	608	23.1
1973	2,884	2,053	71.2	831	28.8
1974	3,023	2,154	71.2	869	28.8
1975	3,409	2,410	70.7	999	29.3
1976	3,729	2,549	68.4	1,180	31.6
1977	4,067	2,800	68.8	1,267	31.2
1978 1/	4,625	-	-	-	-
1979	5,361	3,612	67.4	1,749	32.6
1980	6,060	4,026	66.4	2,034	33.6
1981	6,818	4,576	67.1	2,242	32.9
1982	7,261	4,849	66.8	2,411	33.2
1983	7,745	5,214	67.3	2,531	32.7

1/ DATA WERE NOT COLLECTED IN 1978.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-3. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1976	1977	1978 1/	1979	1980	1981	1982	1983
TOTAL	3,729,007	4,066,953	4,624,673	5,361,408	6,060,118	6,818,343	7,260,636	7,744,954
SOURCE OF FUNDS:								
FEDERAL GOVERNMENT	2,[illegible]1,867	2,726,126	3,058,734	3,595,271	4,093,586	4,559,049	4,749,264	4,959,603
STATE AND LOCAL GOVERNMENTS	363,746	373,943	414,389	470,073	493,649	548,376	593,348	599,041
INDUSTRY	123,145	138,807	169,623	194,186	236,958	291,021	329,805	370,168
INSTITUTIONAL FUNDS	445,590	514,275	622,646	728,298	827,338	973,805	1,088,442	1,230,779
ALL OTHER SOURCES	284,659	313,802	359,281	373,580	408,587	446,092	499,777	585,363
CHARACTER OF WORK: 2/								
BASIC RESEARCH	2,548,820	2,799,649	-	3,612,278	4,026,180	4,576,230	4,849,383	5,213,618
APPLIED RESEARCH AND DEVELOPMENT	1,180,187	1,267,304	-	1,749,130	2,033,938	2,242,113	2,411,253	2,531,336
FIELD:								
ENGINEERING, TOTAL 3/	431,727	498,473	601,062	768,407	864,040	959,989	1,024,323	1,100,902
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	46,286	45,523	60,645	65,011
CHEMICAL	-	-	-	-	67,559	83,215	83,342	88,951
CIVIL	-	-	-	-	88,604	108,189	108,288	106,902
ELECTRICAL	-	-	-	-	183,727	192,796	224,326	257,300
MECHANICAL	-	-	-	-	145,621	148,525	141,245	147,542
OTHER, N.E.C.	-	-	-	-	332,243	381,681	406,477	435,196
ALL SCIENCES, TOTAL	3,297,280	3,568,480	4,023,611	4,593,001	5,196,078	5,858,354	6,236,313	6,644,052
PHYSICAL SCIENCES	379,379	423,457	496,399	601,904	677,604	766,504	822,0[illegible]9	890,026
ASTRONOMY	26,294	32,361	36,782	48,459	58,741	67,391	73,296	74,300
CHEMISTRY	140,142	159,353	1[illegible],131	206,421	244,454	285,520	310,668	335,833
PHYSICS	183,050	201,655	236,099	292,033	322,057	356,944	363,302	407,333
OTHER, N.E.C.	29,893	30,088	41,387	54,991	52,352	56,649	74,833	72,540
ENVIRONMENTAL SCIENCES 3/	288,531	319,398	379,391	452,915	509,166	550,355	558,819	618,126
ATMOSPHERIC	-	-	-	-	67,531	78,351	85,705	97,745
EARTH SCIENCES	-	-	-	-	188,331	190,415	194,186	212,999
OCEANOGRAPHY	-	-	-	-	171,451	187,398	198,252	224,749
OTHER, N.E.C.	-	-	-	-	81,853	94,191	80,676	82,633
MATH/COMPUTER SCIENCES	86,994	107,879	126,178	176,398	192,736	222,028	244,725	278,238
MATHEMATICS	42,491	52,312	58,756	78,477	78,585	89,008	96,142	101,347
COMPUTER SCIENCES	44,503	55,563	67,422	97,921	114,151	133,020	148,583	176,891
LIFE SCIENCES	2,101,695	2,258,806	2,533,004	2,832,523	3,217,773	3,674,151	3,972,650	4,209,679
AGRICULTURAL SCIENCES	412,867	460,647	521,745	602,485	679,304	773,059	839,951	892,857
BIOLOGICAL SCIENCES	710,724	772,290	808,503	914,806	1,031,037	1,188,367	1,289,579	1,391,972
MEDICAL SCIENCES	897,376	950,907	1,128,652	1,237,556	1,414,356	1,599,409	1,721,694	1,798,086
OTHER, N.E.C.	80,728	74,962	79,107	77,676	93,076	112,816	121,426	126,764
PSYCHOLOGY	77,888	85,133	89,664	100,531	111,177	128,560	131,883	137,170
SOCIAL SCIENCES	262,261	268,087	277,497	295,138	343,551	372,289	353,809	345,512
ECONOMICS	65,447	72,124	79,129	83,089	90,162	99,711	94,671	94,698
POLITICAL SCIENCE	28,355	32,314	36,571	45,431	55,450	56,695	60,755	55,272
SOCIOLOGY	66,246	61,939	66,900	74,641	88,548	94,986	79,335	76,869
OTHER, N.E.C.	102,213	101,710	94,897	91,977	107,391	120,897	119,048	118,673
OTHER SCIENCES, N.E.C.	100,532	105,724	116,478	133,592	146,071	144,467	152,328	165,301

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
2/ DATA WERE NOT COLLECTED IN 1978.
3/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-6. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1976	1977	1978 1/	1979	1980	1981	1982	1983
TOTAL	2,511,867	2,726,126	3,058,734	3,595,271	4,093,586	4,559,049	4,749,264	4,959,603
CHARACTER OF WORK: 2/								
BASIC RESEARCH	1,841,723	2,006,589	-	2,571,744	2,850,670	3,247,660	3,392,863	3,533,487
APPLIED RESEARCH AND DEVELOPMENT	670,644	719,537	-	1,023,527	1,243,916	1,311,389	1,356,401	1,426,116
FIELD:								
ENGINEERING, TOTAL 3/	290,518	336,725	407,487	526,364	594,551	661,578	697,152	735,327
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	35,610	35,302	48,097	52,173
CHEMICAL	-	-	-	-	46,057	55,168	49,616	51,521
CIVIL	-	-	-	-	58,879	67,907	59,313	57,620
ELECTRICAL	-	-	-	-	139,302	145,122	173,503	191,968
MECHANICAL	-	-	-	-	99,239	102,460	96,973	100,439
OTHER, N.E.C.	-	-	-	-	215,464	255,619	269,950	281,606
ALL SCIENCES, TOTAL	2,221,349	2,389,401	2,651,247	3,068,907	3,499,035	3,897,471	4,052,112	4,224,276
PHYSICAL SCIENCES	305,407	338,782	392,346	490,680	554,455	618,612	649,358	699,292
ASTRONOMY	18,351	23,230	26,349	36,245	44,441	47,876	51,728	50,459
CHEMISTRY	107,867	121,453	130,001	156,516	189,287	216,630	231,489	248,990
PHYSICS	156,102	171,910	199,161	252,518	279,666	308,481	305,532	340,658
OTHER, N.E.C.	23,087	22,189	28,835	45,401	41,061	45,625	60,409	59,205
ENVIRONMENTAL SCIENCES 3/	211,822	238,591	275,080	329,154	371,862	391,929	391,403	426,761
ATMOSPHERIC	-	-	-	-	55,524	58,698	68,446	76,108
EARTH SCIENCES	-	-	-	-	131,003	128,078	125,857	134,332
OCEANOGRAPHY	-	-	-	-	132,324	145,586	153,715	171,456
OTHER, N.E.C.	-	-	-	-	53,011	59,567	43,385	44,865
MATH/COMPUTER SCIENCES	65,807	78,184	85,344	129,523	137,945	161,282	178,927	204,092
MATHEMATICS	32,882	40,638	44,130	60,431	61,028	67,839	72,015	75,256
COMPUTER SCIENCES	32,925	37,546	41,214	69,192	76,917	93,443	106,912	128,836
LIFE SCIENCES	1,380,846	1,473,984	1,626,413	1,818,779	2,093,749	2,363,959	2,494,148	2,568,514
AGRICULTURAL SCIENCES	122,538	132,772	155,349	184,676	211,285	234,026	255,159	253,939
BIOLOGICAL SCIENCES	522,172	575,129	630,560	664,675	762,897	866,300	921,758	981,873
MEDICAL SCIENCES	677,509	712,327	784,808	914,905	1,056,525	1,187,297	1,238,768	1,264,146
OTHER, N.E.C.	58,627	53,756	55,696	54,523	63,042	76,336	78,463	68,556
PSYCHOLOGY	59,367	63,648	63,996	72,257	81,053	92,451	89,103	91,042
SOCIAL SCIENCES	138,255	138,205	140,445	155,074	181,627	187,623	162,506	148,819
ECONOMICS	29,132	31,595	37,103	40,026	43,430	44,532	41,226	37,681
POLITICAL SCIENCE	11,966	14,926	15,888	20,561	23,676	23,398	22,561	20,034
SOCIOLOGY	41,115	37,854	40,597	47,144	57,140	56,500	46,127	42,852
OTHER, N.E.C.	56,042	53,830	46,857	47,343	57,381	63,193	52,592	48,282
OTHER SCIENCES, N.E.C.	59,845	58,007	67,623	73,344	78,344	81,615	86,467	85,756

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
2/ DATA WERE NOT COLLECTED IN 1978.
3/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-5. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1976	1977	1978 1/	1979	1980	1981	1982	1983
TOTAL NON-FEDERAL	1,217,140	1,340,827	1,565,939	1,766,137	1,966,532	2,259,294	2,511,372	2,785,351
SOURCE OF FUNDS:								
STATE AND LOCAL GOVERNMENTS	363,746	373,943	414,289	470,073	493,649	548,376	593,348	599,041
INDUSTRY	123,145	138,807	169,622	194,186	236,958	291,021	329,805	370,168
INSTITUTIONAL FUNDS	445,590	514,275	622,646	728,298	827,338	973,805	1,088,442	1,230,779
ALL OTHER SOURCES	284,659	313,802	359,201	373,580	408,587	446,092	499,777	585,363
CHARACTER OF WORK: 2/								
BASIC RESEARCH	707,597	793,060	-	1,040,334	1,175,510	1,328,570	1,456,520	1,680,131
APPLIED RESEARCH AND DEVELOPMENT	509,543	547,767	-	725,603	791,022	930,724	1,054,852	1,105,220
FIELD:								
ENGINEERING, TOTAL 3/	141,209	161,748	193,575	242,043	269,489	298,411	327,171	365,[illegible]
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	10,676	10,221	12,548	12,838
CHEMICAL	-	-	-	-	21,502	28,047	33,725	37,430
CIVIL	-	-	-	-	29,725	40,282	49,275	49,282
ELECTRICAL	-	-	-	-	44,425	47,674	50,823	65,332
MECHANICAL	-	-	-	-	46,382	46,125	44,271	47,103
OTHER, N.E.C.	-	-	-	-	116,779	126,062	136,527	153,590
ALL SCIENCES, TOTAL	1,075,931	1,179,079	1,372,364	1,524,094	1,697,043	1,960,883	2,184,201	2,419,776
PHYSICAL SCIENCES	73,972	84,675	104,053	111,224	123,149	147,892	172,541	190,734
ASTRONOMY	7,943	9,131	10,433	12,214	14,300	19,515	21,568	23,861
CHEMISTRY	32,275	37,900	45,130	49,905	55,167	68,890	79,179	86,863
PHYSICS	26,948	29,745	35,938	39,515	42,391	48,463	57,370	66,675
OTHER, N.E.C.	6,806	7,899	12,552	9,590	11,291	11,024	14,424	13,335
ENVIRONMENTAL SCIENCES 3/	76,769	80,807	104,311	123,761	137,304	158,426	167,416	191,365
ATMOSPHERIC	-	-	-	-	12,007	19,653	17,259	21,637
EARTH SCIENCES	-	-	-	-	57,368	62,337	68,329	78,667
OCEANOGRAPHY	-	-	-	-	39,127	41,812	44,537	53,293
OTHER, N.E.C.	-	-	-	-	28,842	34,624	37,291	37,768
MATH/COMPUTER SCIENCES	21,187	29,691	40,834	46,775	54,791	60,746	65,798	74,146
MATHEMATICS	9,609	11,674	14,626	18,046	17,557	21,169	24,127	26,091
COMPUTER SCIENCES	11,578	18,017	26,208	28,729	37,234	39,577	41,671	48,055
LIFE SCIENCES	720,949	784,832	911,591	1,013,744	1,124,024	1,310,192	1,478,502	1,641,165
AGRICULTURAL SCIENCES	290,829	327,875	366,396	417,809	468,019	539,033	584,792	628,918
BIOLOGICAL SCIENCES	188,952	197,161	217,940	250,131	268,140	322,567	367,821	410,099
MEDICAL SCIENCES	219,867	238,580	303,844	322,651	357,831	412,112	482,926	552,540
OTHER, N.E.C.	22,101	21,206	23,411	23,153	30,034	36,480	42,963	49,208
PSYCHOLOGY	18,521	21,485	25,668	28,274	30,124	36,104	42,780	46,128
SOCIAL SCIENCES	124,006	129,882	137,052	140,064	159,924	184,666	191,303	196,693
ECONOMICS	36,315	40,529	42,026	43,063	46,732	55,179	53,445	57,047
POLITICAL SCIENCE	16,389	17,388	20,683	24,870	31,774	31,297	38,194	35,238
SOCIOLOGY	25,131	24,085	26,303	27,497	31,408	36,486	33,208	34,017
OTHER, N.E.C.	46,171	47,880	48,040	44,634	50,010	57,704	66,456	70,391
OTHER SCIENCES, N.E.C.	40,687	47,717	48,855	40,252	67,727	62,852	65,861	79,545

1/ ESTIMATED, BASED ON DATA COLLECTED FROM DOCTORATE-GRANTING INSTITUTIONS ONLY.
2/ DATA WERE NOT COLLECTED IN 1978.
3/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-6. — R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL	3,656,885	3,987,885	4,540,256	5,271,643	5,958,697	6,695,744	7,132,245	7,610,529
SOURCE OF FUNDS:								
FEDERAL GOVERNMENT	2,465,396	2,677,468	3,004,930	3,534,215	4,027,566	4,479,689	4,668,588	4,877,540
STATE AND LOCAL GOVERNMENTS	356,451	365,569	406,509	461,534	483,694	536,687	578,471	581,970
INDUSTRY	120,087	135,031	166,271	190,733	232,691	284,556	312,884	362,635
INSTITUTIONAL FUNDS	436,795	502,930	610,068	716,069	823,577	958,595	1,072,657	1,212,415
ALL OTHER SOURCES	278,159	306,892	352,478	369,092	401,169	436,417	490,045	575,969
CHARACTER OF WORK: 1/								
BASIC RESEARCH	2,507,788	2,758,513	-	3,661,649	3,965,790	4,501,422	4,766,129	5,125,412
APPLIED RESEARCH AND DEVELOPMENT	1,149,100	1,229,372	-	1,709,994	1,992,907	2,194,322	2,366,116	2,485,117
FIELD:								
ENGINEERING 2/	425,182	494,521	591,962	761,142	856,186	951,834	1,016,096	1,090,981
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	45,743	44,920	59,773	64,200
CHEMICAL	-	-	-	-	66,878	82,957	83,121	88,733
CIVIL	-	-	-	-	86,663	106,068	106,323	104,662
ELECTRICAL	-	-	-	-	182,920	191,578	223,327	295,844
MECHANICAL	-	-	-	-	144,595	147,119	139,932	145,817
OTHER, N.E.C.	-	-	-	-	329,387	379,192	403,620	431,725
PHYSICAL SCIENCES	399,497	410,642	481,447	585,227	659,265	746,574	800,738	868,670
ASTRONOMY	26,094	22,117	36,505	47,969	58,087	66,746	72,662	73,444
CHEMISTRY	133,613	152,454	175,6[illegible]	198,788	234,769	273,391	297,419	322,344
PHYSICS	179,013	197,861	230,678	286,738	315,902	350,576	356,835	401,019
OTHER, N.E.C.	27,777	28,210	38,826	51,732	50,507	55,861	73,822	71,663
ENVIRONMENTAL SCIENCES 2/	279,503	309,283	367,337	443,531	496,249	533,001	541,977	599,424
ATMOSPHERIC	-	-	-	-	65,307	75,303	83,613	95,471
EARTH SCIENCES	-	-	-	-	182,531	183,983	187,615	205,090
OCEANOGRAPHY	-	-	-	-	169,382	183,314	195,052	221,322
OTHER, N.E.C.	-	-	-	-	79,029	90,401	75,697	77,541
MATHEMATICAL/COMPUTER SCIENCES	84,661	104,046	121,675	172,417	188,044	216,928	237,303	270,857
MATHEMATICS	41,330	51,050	57,342	77,141	76,698	86,128	92,073	96,951
COMPUTER SCIENCES	43,331	52,996	64,333	95,276	111,346	130,800	145,230	173,906
LIFE SCIENCES	2,081,677	2,234,749	2,515,138	2,802,489	3,184,899	3,632,991	3,927,257	4,162,641
AGRICULTURAL SCIENCES	406,359	453,787	514,409	591,631	666,756	756,048	829,910	870,944
BIOLOGICAL SCIENCES	700,149	788,929	793,613	899,789	1,016,551	1,170,266	1,268,059	1,370,886
MEDICAL SCIENCES	895,769	947,629	1,128,652	1,234,837	1,410,708	1,596,510	1,719,304	1,796,225
OTHER, N.E.C.	79,416	74,404	78,464	76,232	90,884	110,167	118,784	124,566
PSYCHOLOGY	74,621	82,199	86,556	93,944	106,712	121,959	127,692	132,497
SOCIAL SCIENCES	248,467	254,749	264,351	283,183	324,002	350,185	332,406	324,870
ECONOMICS	64,356	70,825	74,332	80,780	87,759	96,608	92,801	92,746
POLITICAL SCIENCE	27,487	31,144	40,393	44,284	50,331	54,309	58,294	52,968
SOCIOLOGY	63,634	59,356	65,030	72,059	83,285	86,311	72,036	69,315
OTHER, N.E.C.	93,790	93,424	84,596	86,060	100,127	112,957	109,275	109,841
OTHER SCIENCES, N.E.C.	99,280	101,286	111,790	129,710	143,340	142,272	148,776	160,549

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-7. — FEDERALLY FINANCED R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976–83

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL	2,465,396	2,677,463	3,004,930	3,534,215	4,027,566	4,479,489	4,668,588	4,877,540
CHARACTER OF WORK: 1/								
BASIC RESEARCH	1,814,631	1,980,963	-	2,533,971	2,808,782	3,196,415	3,336,026	3,477,200
APPLIED RESEARCH AND DEVELOPMENT	650,765	696,500	-	1,000,244	1,218,784	1,283,074	1,332,562	1,400,340
FIELD:								
ENGINEERING 2/	286,609	332,283	402,102	520,978	588,798	656,212	691,967	729,155
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	35,107	34,747	47,284	51,486
CHEMICAL	-	-	-	-	45,504	55,051	49,562	51,478
CIVIL	-	-	-	-	57,339	66,407	57,402	56,063
ELECTRICAL	-	-	-	-	138,772	144,301	172,838	190,985
MECHANICAL	-	-	-	-	98,552	101,485	96,253	92,285
OTHER, N.E.C.	-	-	-	-	213,524	254,221	268,428	279,858
PHYSICAL SCIENCES	296,826	330,554	383,004	478,623	542,015	604,909	625,463	686,481
ASTRONOMY	18,208	23,028	26,120	35,765	43,875	47,319	51,182	49,880
CHEMISTRY	103,129	116,852	132,921	151,781	183,128	208,638	222,025	241,243
PHYSICS	153,070	168,987	195,776	248,051	274,676	303,695	301,017	336,322
OTHER, N.E.C.	22,411	21,687	28,187	43,037	40,336	45,257	60,239	59,036
ENVIRONMENTAL SCIENCES 2/	205,968	231,765	267,196	322,486	362,609	381,169	380,904	415,447
ATMOSPHERIC	-	-	-	-	53,418	56,305	66,579	74,073
EARTH SCIENCES	-	-	-	-	126,797	123,449	121,307	129,164
OCEANOGRAPHY	-	-	-	-	131,154	144,275	152,567	170,328
OTHER, N.E.C.	-	-	-	-	51,240	57,140	40,451	41,882
MATHEMATICAL/COMPUTER SCIENCES	54,638	76,413	83,412	128,131	136,162	158,696	175,521	200,447
MATHEMATICS	32,334	39,972	43,407	59,685	59,939	65,957	69,704	72,816
COMPUTER SCIENCES	32,304	36,441	40,005	68,446	76,223	92,739	105,817	127,631
LIFE SCIENCES	1,366,069	1,457,035	1,607,969	1,796,934	2,069,282	2,332,642	2,459,728	2,533,218
AGRICULTURAL SCIENCES	117,413	127,891	150,105	176,039	200,966	220,770	241,049	246,244
BIOLOGICAL SCIENCES	514,696	565,558	577,688	653,701	752,096	851,707	904,876	967,047
MEDICAL SCIENCES	676,213	710,116	824,808	913,824	1,054,815	1,185,538	1,236,888	1,243,759
OTHER, N.E.C.	57,747	53,470	55,368	53,370	61,405	74,627	76,915	76,164
PSYCHOLOGY	56,846	61,504	61,844	66,684	77,760	87,834	86,610	88,316
SOCIAL SCIENCES	131,522	132,864	135,209	148,928	174,416	177,633	153,922	141,572
ECONOMICS	28,550	30,870	35,726	38,572	42,173	43,214	40,620	37,096
POLITICAL SCIENCE	11,531	14,410	17,025	20,169	23,093	22,828	21,877	19,297
SOCIOLOGY	39,777	36,600	39,648	45,922	54,197	52,165	42,551	39,409
OTHER, N.E.C.	51,654	50,984	42,810	44,265	54,953	59,426	48,474	45,770
OTHER SCIENCES, N.E.C.	56,918	55,045	64,194	71,440	76,524	80,394	84,573	82,908

1/ DATA HERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-8. — NON-FEDERAL R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL NON-FEDERAL	1,191,492	1,310,422	1,535,326	1,737,428	1,931,131	2,216,255	2,463,657	2,732,989
SOURCE OF FUNDS:								
STATE AND LOCAL GOVERNMENTS	356,451	363,569	406,509	461,534	483,694	536,687	578,071	581,970
INDUSTRY	120,087	135,031	166,271	190,733	232,691	284,556	322,884	362,635
INSTITUTIONAL FUNDS	436,795	502,930	610,068	716,069	813,577	958,595	1,072,657	1,212,415
ALL OTHER SOURCES	278,159	306,892	352,478	369,092	401,169	436,417	490,045	575,969
CHARACTER OF WORK: 1/								
BASIC RESEARCH	693,157	777,550	-	1,027,678	1,157,008	1,305,007	1,430,103	1,648,252
APPLIED RESEARCH AND DEVELOPMENT	498,335	532,872	-	709,750	774,123	911,248	1,033,554	1,084,737
FIELD:								
ENGINEERING 2/	138,573	158,648	189,860	240,164	267,388	295,622	324,129	361,826
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	10,636	10,173	12,489	12,714
CHEMICAL	-	-	-	-	21,374	27,906	33,559	37,255
CIVIL	-	-	-	-	29,324	39,661	48,721	48,599
ELECTRICAL	-	-	-	-	44,148	47,277	50,489	64,859
MECHANICAL	-	-	-	-	46,043	45,634	43,679	46,532
OTHER, N.E.C.	-	-	-	-	115,863	124,971	135,192	151,867
PHYSICAL SCIENCES	69,671	80,088	98,443	106,593	117,250	141,665	165,375	182,189
ASTRONOMY	7,886	9,089	10,885	12,204	14,212	19,427	21,480	23,564
CHEMISTRY	30,484	35,602	42,517	47,007	51,641	64,753	74,494	81,301
PHYSICS	25,935	28,974	34,902	38,687	41,226	46,881	55,818	64,697
OTHER, N.E.C.	5,366	6,523	10,639	8,695	10,171	10,604	13,583	12,627
ENVIRONMENTAL SCIENCES 2/	73,535	77,593	100,141	121,048	133,640	151,832	161,073	183,977
ATMOSPHERIC	-	-	-	-	11,889	18,998	17,034	21,398
EARTH SCIENCES	-	-	-	-	55,734	60,534	64,308	75,926
OCEANOGRAPHY	-	-	-	-	38,228	39,033	42,485	50,994
OTHER, N.E.C.	-	-	-	-	27,789	33,261	35,246	35,659
MATHEMATICAL/COMPUTER SCIENCES	20,023	27,633	38,263	44,286	51,882	58,232	61,782	70,410
MATHEMATICS	8,996	11,078	13,935	17,456	16,759	20,171	22,369	24,135
COMPUTER SCIENCES	11,027	16,555	24,328	26,830	35,123	38,061	39,413	46,275
LIFE SCIENCES	715,608	777,714	907,169	1,003,555	1,115,617	1,300,349	1,467,529	1,629,427
AGRICULTURAL SCIENCES	288,946	325,896	364,304	415,592	465,790	535,278	579,861	624,720
BIOLOGICAL SCIENCES	185,447	193,371	215,925	246,048	264,455	318,559	363,183	403,829
MEDICAL SCIENCES	219,546	237,513	303,844	321,013	355,893	410,972	482,616	552,466
OTHER, N.E.C.	21,669	20,934	23,096	22,862	29,479	35,540	41,869	48,402
PSYCHOLOGY	17,775	20,695	24,712	27,260	28,952	34,125	41,692	44,181
SOCIAL SCIENCES	116,945	121,885	129,142	134,255	149,586	172,552	178,484	183,298
ECONOMICS	35,796	39,955	38,606	42,208	45,086	53,394	52,181	55,650
POLITICAL SCIENCE	15,556	16,734	23,368	24,115	30,238	31,481	36,417	33,671
SOCIOLOGY	23,857	22,756	25,382	26,137	29,088	34,146	29,085	29,756
OTHER, N.E.C.	41,736	42,440	41,786	41,795	45,174	53,531	60,801	64,171
OTHER SCIENCES, N.E.C.	39,362	46,241	47,596	58,270	66,816	61,878	64,203	77,668

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-9. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	7,260,636	7,744,954	6.7	4,[illegible]955	4,968,764	7.7	2,645,681	2,776,190	4.9
SOURCE OF FUNDS:									
FEDERAL GOVERNMENT	4,[illegible]49,264	4,959,603	4.4	2,[illegible]358	2,850,287	4.9	2,932,906	2,109,316	3.8
STATE AND LOCAL GOVERNMENTS	[illegible]93,348	599,041	1.0	544,[illegible]316	546,308	.4	49,033	52,733	7.5
INDUSTRY	329,805	370,168	12.2	[illegible]03,[illegible]49	229,520	12.9	126,456	140,648	11.2
INSTITUTIONAL FUNDS	1,088,442	1,230,779	13.1	850,373	983,288	15.6	238,069	247,491	4.0
ALL OTHER SOURCES	499,777	585,363	17.1	300,560	359,361	19.6	199,217	226,002	13.4
CHARACTER OF WORK:									
BASIC RESEARCH	4,849,383	5,213,618	7.5	2,850,445	3,114,735	9.3	1,998,938	2,098,883	5.0
APPLIED RESEARCH AND DEVELOPMENT	2,411,253	2,531,336	5.0	1,764,510	1,854,029	5.1	646,743	677,307	4.7
FIELD:									
ENGINEERING	1,024,323	1,100,902	7.5	594,738	645,223	8.5	429,585	455,679	6.1
AERONAUTICAL AND ASTRONAUTICAL	60,[illegible]	65,011	7.[illegible]	24,065	27,574	14.6	36,580	37,437	2.3
CHEMICAL	[illegible],[illegible]	88,951	6.[illegible]	53,171	56,321	5.9	30,171	32,630	8.2
CIVIL	[illegible],288	106,902	-1.3	81,824	79,889	-2.4	26,464	27,013	2.1
ELECTRICAL	224,326	257,[illegible]00	14.7	115,038	141,280	22.8	[illegible],288	116,020	6.2
MECHANICAL	141,245	147,542	4.5	73,178	76,240	4.2	68,067	71,302	4.8
OTHER, N.E.C.	406,477	435,196	7.1	247,462	263,919	6.7	159,015	171,277	7.7
PHYSICAL SCIENCES	822,079	890,026	8.3	466,824	506,424	8.5	355,275	383,602	8.0
ASTRONOMY	73,296	74,300	1.4	53,697	54,365	1.2	19,599	19,935	1.7
CHEMISTRY	310,668	335,853	8.1	193,034	210,424	9.0	117,634	125,429	6.6
PHYSICS	363,302	407,333	12.1	187,260	213,957	14.3	176,042	193,376	9.8
OTHER, N.E.C.	74,833	72,540	-3.1	32,833	27,678	-15.7	42,000	44,862	6.8
ENVIRONMENTAL SCIENCES	558,819	618,126	10.6	391,924	443,832	13.2	166,895	174,294	4.4
ATMOSPHERIC	85,705	97,745	14.0	65,553	76,270	16.3	20,152	21,475	6.6
EARTH SCIENCES	194,186	212,999	9.7	140,346	155,229	10.6	53,840	57,770	7.3
OCEANOGRAPHY	198,252	224,749	13.4	138,876	163,515	17.7	59,376	61,234	3.1
OTHER, N.E.C.	80,676	83,633	3.7	47,149	48,818	3.5	33,527	33,815	.9
MATHEMATICAL/COMPUTER SCIENCES	244,725	278,238	13.7	115,214	131,875	14.5	129,511	146,363	13.0
MATHEMATICS	96,142	101,347	5.4	49,847	53,801	7.9	46,295	47,546	2.7
COMPUTER SCIENCES	148,583	176,891	19.1	65,367	78,074	19.4	83,216	98,817	18.7
LIFE SCIENCES	3,972,650	4,209,679	6.0	2,605,608	2,773,644	6.6	1,367,042	1,430,825	4.7
AGRICULTURAL SCIENCES	839,951	892,857	6.3	814,776	867,095	6.4	25,175	25,762	2.3
BIOLOGICAL SCIENCES	1,289,579	1,391,972	7.9	763,205	834,718	9.4	526,374	557,254	5.9
MEDICAL SCIENCES	1,721,694	1,798,086	4.4	976,651	1,012,020	3.6	745,043	786,066	5.5
OTHER, N.E.C.	121,426	126,764	4.4	50,976	65,011	27.5	70,450	61,753	-12.3
PSYCHOLOGY	131,883	137,170	4.0	86,119	90,712	5.3	45,764	46,458	1.5
SOCIAL SCIENCES	353,809	345,712	-2.3	240,481	244,209	1.6	113,378	101,303	-10.6
ECONOMICS	94,671	94,698	.0	69,303	69,251	-.1	25,368	25,443	.3
POLITICAL SCIENCE	60,755	55,277	-9.0	42,958	37,594	-12.5	17,797	17,681	-.7
SOCIOLOGY	79,335	76,869	-3.1	51,189	52,275	2.0	28,146	24,644	-12.4
OTHER, N.E.C.	119,048	118,673	-.3	77,031	85,138	10.5	42,017	33,535	-20.2
OTHER SCIENCES, N.E.C.	152,328	165,301	8.5	114,047	127,645	11.9	38,281	37,656	-1.6

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-10. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL FEDERAL	4,749,264	4,959,603	4.4	2,716,358	2,850,287	4.9	2,032,906	2,109,316	3.8
CHARACTER OF WORK:									
BASIC RESEARCH	3,392,863	3,533,487	4.1	1,824,923	1,910,127	4.7	1,567,940	1,623,360	3.5
APPLIED RESEARCH AND DEVELOPMENT	1,356,401	1,426,116	5.1	891,435	940,160	5.5	464,966	485,956	4.5
FIELD:									
ENGINEERING	697,152	735,327	5.5	351,819	372,458	5.9	345,333	362,869	5.1
AERONAUTICAL AND ASTRONAUTICAL	48,097	52,173	8.5	17,055	19,810	16.2	31,042	32,363	4.3
CHEMICAL	49,616	51,521	3.8	29,150	30,278	3.5	20,466	21,343	4.3
CIVIL	59,013	57,620	-2.4	39,931	38,448	-3.7	19,082	19,172	.5
ELECTRICAL	173,503	191,968	10.6	79,777	95,063	19.2	93,726	96,905	3.4
MECHANICAL	96,973	100,439	3.6	44,903	46,535	3.6	52,070	53,904	3.5
OTHER, N.E.C.	269,950	281,606	4.3	141,003	142,434	1.0	128,947	139,182	7.9
PHYSICAL SCIENCES	649,558	699,292	7.7	349,253	375,507	7.5	300,305	323,785	7.8
ASTRONOMY	52,728	50,439	-2.6	39,066	37,471	-4.1	12,662	12,968	2.4
CHEMISTRY	231,489	248,990	7.6	139,385	151,373	8.6	92,104	97,617	6.0
PHYSICS	305,932	340,658	11.4	147,247	167,371	13.7	158,685	173,287	9.2
OTHER, N.E.C.	60,409	59,205	-2.0	23,555	19,292	-18.1	36,854	39,913	8.3
ENVIRONMENTAL SCIENCES	391,403	426,761	9.0	253,400	284,157	12.1	138,003	142,604	3.3
ATMOSPHERIC	68,446	76,108	11.2	50,598	56,970	12.6	17,848	19,138	7.2
EARTH SCIENCES	125,857	134,332	6.7	82,615	89,482	8.3	43,242	44,850	3.7
OCEANOGRAPHY	153,715	171,456	11.5	101,494	118,924	17.2	52,221	52,532	.6
OTHER, N.E.C.	43,385	44,865	3.4	18,693	18,781	.5	24,692	26,084	5.6
MATHEMATICAL/COMPUTER SCIENCES	178,927	204,092	14.1	70,325	80,552	14.5	108,602	123,540	13.8
MATHEMATICS	72,015	75,255	4.5	33,197	34,370	3.5	38,823	40,886	5.3
COMPUTER SCIENCES	106,912	128,836	20.5	37,128	46,182	24.4	69,779	82,654	18.4
LIFE SCIENCES	2,494,148	2,568,514	3.0	1,472,067	1,519,867	3.2	1,022,081	1,048,647	2.6
AGRICULTURAL SCIENCES	255,159	263,939	3.4	248,091	256,879	3.5	7,068	7,060	-.1
BIOLOGICAL SCIENCES	921,758	981,873	6.5	516,783	560,345	8.4	404,975	421,528	4.1
MEDICAL SCIENCES	1,238,768	1,245,146	.5	680,253	671,224	-1.3	558,515	573,922	2.8
OTHER, N.E.C.	78,463	77,556	-1.2	26,940	31,419	16.6	51,523	46,137	-10.5
PSYCHOLOGY	89,103	91,042	2.2	58,056	58,887	1.4	31,047	32,155	3.6
SOCIAL SCIENCES	162,506	148,819	-8.4	99,542	94,243	-5.3	62,964	54,576	-13.3
ECONOMICS	41,226	37,651	-8.7	27,443	26,010	-5.2	13,783	11,641	-15.5
POLITICAL SCIENCE	22,561	20,034	-11.2	13,685	11,945	-12.7	8,876	8,089	-8.9
SOCIOLOGY	46,127	42,852	-7.1	26,599	26,810	.8	19,528	16,042	-17.9
OTHER, N.E.C.	52,592	48,282	-8.2	31,815	29,478	-7.3	20,777	18,804	-9.5
OTHER SCIENCES, N.E.C.	86,467	85,756	-.8	61,896	64,616	4.4	24,571	21,140	-14.0

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-11. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982–83	1982	1983	PERCENT CHANGE 1982–83	1982	1983	PERCENT CHANGE 1982–83
TOTAL NON-FEDERAL	2,511,372	2,785,351	10.9	1,898,597	2,118,477	11.6	612,775	666,874	8.8
SOURCE OF FUNDS:									
STATE AND LOCAL GOVERNMENTS	593,348	599,041	1.0	544,315	546,308	.4	49,033	52,733	7.5
INDUSTRY	329,805	370,168	12.2	203,349	229,520	12.9	126,456	140,648	11.2
INSTITUTIONAL FUNDS	1,088,442	1,230,779	13.1	850,373	983,288	15.6	238,069	247,491	4.0
ALL OTHER SOURCES	499,777	585,363	17.1	300,560	359,361	19.6	199,217	226,002	13.4
CHARACTER OF WORK:									
BASIC RESEARCH	1,456,520	1,680,131	15.4	1,025,522	1,204,608	17.5	430,998	475,523	10.3
APPLIED RESEARCH AND DEVELOPMENT	1,054,852	1,105,220	4.8	873,075	913,869	4.7	181,777	191,351	5.3
FIELD:									
ENGINEERING	327,171	365,575	11.7	242,919	272,765	12.3	84,252	92,810	10.2
AERONAUTICAL AND ASTRONAUTICAL	12,548	12,838	2.3	7,010	7,764	10.8	5,538	5,074	-8.4
CHEMICAL	33,726	37,430	11.0	24,021	26,143	8.8	9,705	11,287	16.3
CIVIL	49,275	49,282	.0	41,893	41,441	-1.1	7,382	7,841	6.2
ELECTRICAL	50,823	65,332	28.5	35,261	46,217	31.1	15,562	19,115	22.8
MECHANICAL	44,272	47,103	6.4	28,275	29,705	5.1	15,997	17,398	8.8
OTHER, N.E.C.	136,527	153,590	12.5	106,459	121,495	14.1	30,068	32,095	6.7
PHYSICAL SCIENCES	172,541	190,734	10.5	117,571	130,917	11.4	54,970	59,817	8.8
ASTRONOMY	21,568	23,861	10.6	14,631	16,894	15.5	6,937	6,967	.4
CHEMISTRY	79,179	86,863	9.7	53,649	59,051	10.1	25,530	27,812	8.9
PHYSICS	57,370	66,675	16.2	40,013	46,586	16.4	17,357	20,089	15.7
OTHER, N.E.C.	14,424	13,335	-7.5	9,278	8,386	-9.6	5,146	4,949	-3.8
ENVIRONMENTAL SCIENCES	167,416	191,365	14.3	138,524	159,675	15.3	28,892	31,690	9.7
ATMOSPHERIC	17,251	21,637	25.4	14,955	19,300	29.1	2,304	2,337	1.4
EARTH SCIENCES	68,328	78,667	15.1	57,731	65,747	13.9	10,598	12,920	21.9
OCEANOGRAPHY	44,[illegible]	53,293	19.7	37,382	44,591	19.3	[illegible],155	8,702	21.6
OTHER, N.E.C.	37,291	37,768	1.3	28,456	30,037	5.6	8,835	7,731	-12.5
MATHEMATICAL/COMPUTER SCIENCES	65,798	74,146	12.7	44,889	51,323	14.3	20,909	22,823	9.2
MATHEMATICS	24,127	26,091	8.1	16,655	19,431	16.7	7,472	6,660	-10.9
COMPUTER SCIENCES	41,671	48,055	15.3	28,234	31,892	13.0	13,437	16,163	20.3
LIFE SCIENCES	1,478,902	1,641,165	11.0	1,133,541	1,258,977	11.1	344,961	382,188	10.8
AGRICULTURAL SCIENCES	584,702	628,918	7.5	566,685	610,216	7.7	18,107	18,702	3.3
BIOLOGICAL SCIENCES	367,821	410,099	11.5	246,422	274,373	11.3	121,399	135,726	11.8
MEDICAL SCIENCES	482,926	552,940	14.5	296,398	340,796	15.0	186,528	212,144	13.7
OTHER, N.E.C.	42,963	49,208	14.5	24,036	33,592	39.8	18,927	15,616	-17.5
PSYCHOLOGY	42,780	46,128	7.8	28,063	31,825	13.4	14,717	14,303	-2.8
SOCIAL SCIENCES	191,303	196,693	2.8	140,259	149,966	6.4	50,364	46,727	-7.2
ECONOMICS	53,445	57,047	6.7	41,860	43,245	3.3	11,585	13,802	19.1
POLITICAL SCIENCE	38,194	35,238	-7.7	29,273	25,646	-12.4	8,921	9,592	7.5
SOCIOLOGY	33,208	34,017	2.4	24,590	25,415	3.4	8,618	8,602	-.2
OTHER, N.E.C.	66,456	70,391	5.9	45,216	55,660	23.1	21,240	14,731	-30.6
OTHER SCIENCES, N.E.C.	65,861	79,545	20.8	52,151	63,029	20.9	13,710	16,516	20.5

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE 6-12. — R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS, BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	7,132,245	7,610,529	6.7	4,513,620	4,861,007	7.7	2,618,625	2,749,522	5.0
SOURCE OF FUNDS:									
FEDERAL GOVERNMENT	4,668,588	4,877,540	4.5	2,653,140	2,785,022	5.0	2,015,448	2,092,518	3.8
STATE AND LOCAL GOVERNMENTS	578,071	581,970	.7	529,525	529,811	.1	48,546	52,159	7.4
INDUSTRY	322,884	362,635	12.3	199,118	225,047	13.0	123,766	137,588	11.2
INSTITUTIONAL FUNDS	1,072,657	1,212,415	13.0	837,324	967,745	15.6	235,333	244,670	4.0
ALL OTHER SOURCES	490,045	575,969	17.5	294,513	353,382	20.0	195,532	222,587	13.8
CHARACTER OF WORK:									
BASIC RESEARCH	4,766,129	5,125,452	7.5	3,785,155	3,044,567	9.3	1,980,974	2,080,885	5.0
APPLIED RESEARCH AND DEVELOPMENT	2,366,116	2,485,077	5.0	1,728,465	1,816,440	5.1	637,651	668,637	4.9
FIELD:									
ENGINEERING	1,016,096	1,090,981	7.4	589,574	638,754	8.3	426,522	452,227	6.0
AERONAUTICAL AND ASTRONAUTICAL	99,773	64,200	7.4	23,340	26,903	15.3	36,443	37,297	2.3
CHEMICAL	83,121	88,733	6.8	53,0	56,282	6.0	30,048	32,451	8.0
CIVIL	106,323	104,662	-1.6	81,2	79,346	-2.3	25,087	25,316	.9
ELECTRICAL	223,327	255,844	14.6	114,42	140,250	22.6	108,904	115,594	6.1
MECHANICAL	139,932	145,817	4.2	72,191	74,905	3.8	67,741	70,912	4.7
OTHER, N.E.C.	403,620	431,725	7.0	245,321	261,068	6.4	158,299	170,657	7.8
PHYSICAL SCIENCES	800,738	868,670	8.5	452,238	491,341	8.6	348,500	377,329	8.3
ASTRONOMY	72,662	73,444	1.1	53,330	53,781	.8	19,332	19,663	1.7
CHEMISTRY	297,419	322,544	8.4	183,130	200,267	9.4	114,289	122,277	7.0
PHYSICS	356,835	401,019	12.4	183,707	210,372	14.5	173,128	190,647	10.1
OTHER, N.E.C.	73,822	71,663	-2.9	32,071	26,921	-16.1	41,751	44,742	7.2
ENVIRONMENTAL SCIENCES	541,977	599,424	10.6	378,500	428,907	13.3	163,477	170,517	4.3
ATMOSPHERIC	83,61	95,471	14.2	65,710	75,902	16.2	17,303	19,569	6.9
EARTH SCIENCES	187,615	205,090	9.3	134,202	147,800	10.1	53,413	57,290	7.3
OCEANOGRAPHY	195,052	221,322	13.5	136,620	161,306	18.1	58,432	60,016	2.7
OTHER, N.E.C.	75,697	77,541	2.4	42,368	43,899	3.6	33,329	33,642	.9
MATHEMATICAL/COMPUTER SCIENCES	237,303	270,857	14.1	109,500	125,885	15.0	127,803	144,972	13.4
MATHEMATICS	92,073	96,951	5.3	46,238	49,786	7.7	45,835	47,165	2.9
COMPUTER SCIENCES	145,230	173,906	19.7	63,262	76,099	20.3	81,968	97,807	19.3
LIFE SCIENCES	3,927,257	4,162,641	6.0	2,566,118	2,737,705	6.7	1,361,139	1,424,936	4.7
AGRICULTURAL SCIENCES	820,110	870,964	6.1	795,746	845,209	6.2	25,164	25,755	2.3
BIOLOGICAL SCIENCES	1,268,099	1,370,886	8.1	745,953	818,128	9.7	522,106	552,758	5.9
MEDICAL SCIENCES	1,719,544	1,796,225	4.5	974,65	1,010,441	3.7	744,877	785,784	5.5
OTHER, N.E.C.	118,784	124,566	4.9	49,792	63,927	28.4	68,992	60,639	-12.1
PSYCHOLOGY	127,692	132,493	3.8	82,820	87,321	5.4	44,872	45,176	.7
SOCIAL SCIENCES	332,406	324,870	-2.3	224,284	227,967	1.6	108,122	96,903	-10.4
ECONOMICS	92,801	92,746	-.1	68,043	67,938	-.2	24,758	24,808	.2
POLITICAL SCIENCE	58,294	52,968	-9.1	40,845	35,681	-12.6	17,449	17,287	-.9
SOCIOLOGY	72,036	69,315	-3.8	46,42	46,979	1.2	25,607	22,336	-12.8
OTHER, N.E.C.	109,275	109,841	.5	68,967	77,369	12.2	40,308	32,472	-19.4
OTHER SCIENCES, N.E.C.	148,776	160,587	7.9	110,586	123,127	11.3	38,190	37,462	-1.9

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-13. — FEDERALLY FINANCED R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS, BY CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	4,668,588	4,877,540	4.5	2,653,140	2,785,022	5.0	2,015,448	2,092,518	3.8
CHARACTER OF WORK:									
BASIC RESEARCH	3,336,026	3,477,200	4.2	1,779,489	1,864,792	4.8	1,556,537	1,612,408	3.6
APPLIED RESEARCH AND DEVELOPMENT	1,332,562	1,400,340	5.1	873,651	920,230	5.3	458,911	480,110	4.6
FIELD:									
ENGINEERING	691,967	729,155	5.4	348,283	368,207	5.7	343,684	360,948	5.0
AERONAUTICAL AND ASTRONAUTICAL	47,284	51,486	8.9	16,333	19,213	17.6	30,951	32,273	4.3
CHEMICAL	49,562	51,478	3.9	29,113	30,148	3.6	20,449	21,330	4.3
CIVIL	57,602	56,063	-2.7	39,666	38,282	-3.5	17,936	17,781	-.9
ELECTRICAL	172,838	190,985	10.5	79,222	94,186	18.9	93,616	96,799	3.4
MECHANICAL	95,253	99,285	3.2	44,227	45,459	2.8	52,026	53,826	3.5
OTHER, N.E.C.	268,428	279,858	4.3	139,722	140,919	.9	128,706	138,939	8.0
PHYSICAL SCIENCES	635,363	686,481	8.0	339,394	364,645	8.0	295,969	319,836	8.1
ASTRONOMY	51,182	49,880	-2.5	38,712	37,102	-4.2	12,470	12,778	2.5
CHEMISTRY	222,925	241,243	8.2	132,525	145,129	9.5	90,400	96,114	6.3
PHYSICS	301,017	336,322	11.7	144,730	165,253	14.2	156,287	171,069	9.5
OTHER, N.E.C.	60,239	59,036	-2.0	23,427	19,161	-18.2	36,812	39,875	8.3
ENVIRONMENTAL SCIENCES	380,904	415,447	9.1	245,002	274,925	12.2	135,902	140,522	3.4
ATMOSPHERIC	66,579	74,073	11.3	50,523	56,775	12.4	16,056	17,298	7.7
EARTH SCIENCES	121,307	129,164	6.5	78,264	84,458	7.9	43,043	44,706	3.9
OCEANOGRAPHY	152,567	170,328	11.6	100,404	117,879	17.4	52,163	52,449	.5
OTHER, N.E.C.	40,451	41,882	3.5	15,811	15,813	.0	24,640	26,069	5.8
MATHEMATICAL/COMPUTER SCIENCES	175,521	200,447	14.2	67,722	77,584	14.6	107,799	122,863	14.0
MATHEMATICS	69,704	72,816	4.5	31,211	32,174	3.1	38,493	40,642	5.6
COMPUTER SCIENCES	105,817	127,631	20.6	36,511	45,410	24.4	69,306	82,221	18.6
LIFE SCIENCES	2,459,728	2,533,214	3.0	1,442,251	1,469,125	3.3	1,017,477	1,044,089	2.6
AGRICULTURAL SCIENCES	241,049	246,244	2.2	233,981	239,185	2.2	7,068	7,059	-.1
BIOLOGICAL SCIENCES	904,676	967,047	6.9	503,404	548,986	9.1	401,472	418,061	4.1
MEDICAL SCIENCES	1,236,888	1,243,759	.6	678,429	669,878	-1.3	558,459	573,881	2.8
OTHER, N.E.C.	76,915	76,164	-1.0	26,437	31,076	17.5	50,478	45,088	-10.7
PSYCHOLOGY	86,610	88,316	2.0	56,314	57,277	1.7	30,296	31,039	2.5
SOCIAL SCIENCES	153,922	141,572	-8.0	94,167	89,405	-5.1	59,755	52,167	-12.7
ECONOMICS	40,620	37,096	-8.7	27,099	25,666	-5.3	13,521	11,430	-15.5
POLITICAL SCIENCE	21,877	19,297	-11.8	13,148	11,465	-12.8	8,729	7,832	-10.3
SOCIOLOGY	42,951	39,409	-8.2	25,100	24,890	-.8	17,851	14,519	-18.7
OTHER, N.E.C.	48,474	45,770	-5.6	28,820	27,384	-5.0	19,654	18,386	-6.5
OTHER SCIENCES, N.E.C.	84,573	82,908	-2.0	60,007	61,854	3.1	24,566	21,054	-14.3

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-14. — NON-FEDERAL R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS, BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND CONTROL: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	TOTAL			PUBLIC			PRIVATE		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL NON-FEDERAL	2,463,657	2,732,989	10.9	1,860,480	2,075,985	11.6	603,177	657,004	8.9
SOURCE OF FUNDS:									
STATE AND LOCAL GOVERNMENTS	578,071	581,970	.7	529,525	529,811	.1	48,546	52,159	7.4
INDUSTRY	322,884	362,635	12.3	199,118	225,047	13.0	123,766	[illegible]	11.2
INSTITUTIONAL FUNDS	1,072,657	1,212,415	13.0	837,324	967,745	15.6	[illegible]	244,670	4.0
ALL OTHER SOURCES	490,045	575,969	17.5	294,513	353,382	20.0	195,532	222,587	13.8
CHARACTER OF WORK:									
BASIC RESEARCH	1,430,103	1,648,252	15.3	1,005,666	1,179,775	17.3	424,437	468,477	10.4
APPLIED RESEARCH AND DEVELOPMENT	1,033,554	1,084,737	5.0	854,814	896,210	4.8	178,740	188,527	5.5
FIELD:									
ENGINEERING	324,129	361,826	11.6	241,291	270,547	12.1	82,838	91,279	10.2
AERONAUTICAL AND ASTRONAUTICAL	12,489	12,714	1.8	6,997	7,690	9.9	5,492	5,024	-8.5
CHEMICAL	33,579	37,255	11.0	23,960	26,134	9.1	9,699	11,121	15.9
CIVIL	48,721	48,599	-.3	41,570	41,064	-1.2	7,151	7,535	5.4
ELECTRICAL	50,489	64,859	28.5	35,201	46,064	30.9	15,288	18,795	22.9
MECHANICAL	43,679	46,532	6.5	27,964	29,446	5.3	15,715	17,086	8.7
OTHER, N.E.C.	135,192	151,867	12.3	105,599	120,149	13.8	29,593	31,718	7.2
PHYSICAL SCIENCES	165,375	182,189	10.2	112,844	124,696	10.5	52,531	57,493	9.4
ASTRONOMY	21,480	23,564	9.7	14,618	16,679	14.1	6,862	6,885	.3
CHEMISTRY	74,494	81,301	9.1	50,605	55,138	9.0	23,889	26,163	9.5
PHYSICS	55,818	64,697	15.9	33,977	45,119	15.8	16,841	19,578	16.3
OTHER, N.E.C.	13,583	12,627	-7.0	8,644	7,760	-10.2	4,939	4,867	-1.5
ENVIRONMENTAL SCIENCES	161,073	183,977	14.2	133,498	153,982	15.3	27,575	29,995	8.8
ATMOSPHERIC	17,034	21,398	25.6	14,787	19,127	29.4	2,247	2,271	1.1
EARTH SCIENCES	66,308	75,926	14.5	55,938	63,342	13.2	10,370	12,584	21.4
OCEANOGRAPHY	42,485	50,994	20.0	36,216	43,427	19.9	6,269	7,567	20.7
OTHER, N.E.C.	35,246	35,659	1.2	26,557	28,086	5.8	8,689	7,573	-12.8
MATHEMATICAL/COMPUTER SCIENCES	61,782	70,410	14.0	41,778	48,301	15.6	20,004	22,109	10.5
MATHEMATICS	22,369	24,135	7.9	15,027	17,612	17.2	7,342	6,523	-11.2
COMPUTER SCIENCES	39,413	46,275	17.4	26,751	30,689	14.7	12,662	15,586	23.1
LIFE SCIENCES	1,467,529	1,629,427	11.0	1,123,867	1,248,580	11.1	343,662	380,847	10.8
AGRICULTURAL SCIENCES	579,861	624,720	7.7	561,765	606,024	7.9	18,096	18,696	3.3
BIOLOGICAL SCIENCES	363,183	403,839	11.2	242,549	269,142	11.0	120,634	134,697	11.7
MEDICAL SCIENCES	482,616	552,466	14.5	296,198	340,563	15.0	186,418	211,903	13.7
OTHER, N.E.C.	41,869	48,402	15.6	23,355	32,851	40.7	18,514	15,551	-16.0
PSYCHOLOGY	41,082	44,181	7.5	26,506	30,044	13.3	14,576	14,137	-3.0
SOCIAL SCIENCES	178,484	183,298	2.7	130,117	138,562	6.5	48,367	44,736	-7.5
ECONOMICS	52,181	55,650	6.6	40,944	42,272	3.2	11,237	13,378	19.1
POLITICAL SCIENCE	36,417	33,671	-7.5	27,697	24,216	-12.6	8,720	9,455	8.4
SOCIOLOGY	29,085	29,906	2.8	21,329	22,089	3.6	7,756	7,817	.8
OTHER, N.E.C.	60,801	64,071	5.4	40,147	49,985	24.5	20,654	14,086	-31.8
OTHER SCIENCES, N.E.C.	64,203	77,681	21.0	50,979	61,273	21.1	13,624	16,408	20.4

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-15. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND INSTITUTIONAL CATEGORY: [illegible] 1983

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	INSTITUTIONAL CATEGORY 1/				
	DOCTORATE GRANTING	COMPREHENSIVE	GENERAL BACCALAUREATE	PROFESSIONAL AND SPECIALIZED	2-YEAR
TOTAL	6,573,984	344,437	65,142	760,062	1,327
SOURCE OF FUNDS:					
FEDERAL GOVERNMENT	4,250,228	183,892	32,616	491,540	1,327
STATE AND LOCAL GOVERNMENTS	525,073	55,055	6,379	12,534	0
INDUSTRY	284,136	25,791	4,942	53,299	0
INSTITUTIONAL FUNDS	1,041,714	62,839	17,021	109,205	0
ALL OTHER SOURCES	470,835	16,860	4,184	93,484	0
CHARACTER OF WORK:					
BASIC RESEARCH	4,460,280	190,719	45,366	515,926	1,327
APPLIED RESEARCH AND DEVELOPMENT	2,113,706	153,718	19,776	244,136	0
FIELD:					
ENGINEERING	935,365	59,984	2,024	103,529	0
AERONAUTICAL AND ASTRONAUTICAL	56,028	4,225	93	4,665	0
CHEMICAL	75,869	5,118	1	7,963	0
CIVIL	83,914	4,749	733	17,506	0
ELECTRICAL	215,615	8,763	1	32,921	0
MECHANICAL	121,552	11,860	0	14,130	0
OTHER, N.E.C.	382,387	25,269	1,196	26,344	0
PHYSICAL SCIENCES	812,339	49,431	5,848	22,408	0
ASTRONOMY	73,059	931	304	6	0
CHEMISTRY	293,868	28,040	3,311	10,634	0
PHYSICS	375,698	18,395	2,129	11,111	0
OTHER, N.E.C.	69,714	2,065	104	657	0
ENVIRONMENTAL SCIENCES	503,694	30,411	22,473	60,221	1,327
ATMOSPHERIC	76,798	3,177	6,974	9,469	1,327
EARTH SCIENCES	177,713	12,143	2,894	20,249	0
OCEANOGRAPHY	193,279	5,876	9,315	16,279	0
OTHER, N.E.C.	55,904	9,215	3,290	14,224	0
MATHEMATICAL/COMPUTER SCIENCES	250,710	12,644	2,045	12,839	0
MATHEMATICS	90,344	6,036	770	4,197	0
COMPUTER SCIENCES	160,366	6,608	1,275	8,642	0
LIFE SCIENCES	3,497,865	143,078	21,786	546,950	0
AGRICULTURAL SCIENCES	821,496	60,001	9,723	1,637	0
BIOLOGICAL SCIENCES	1,147,674	61,880	10,725	171,693	0
MEDICAL SCIENCES	1,425,288	17,651	868	354,279	0
OTHER, N.E.C.	103,407	3,546	470	19,341	0
PSYCHOLOGY	122,074	9,703	1,665	3,728	0
SOCIAL SCIENCES	299,349	30,712	7,013	8,438	0
ECONOMICS	84,972	5,160	1,144	3,422	0
POLITICAL SCIENCE	49,430	4,011	1,077	754	0
SOCIOLOGY	60,389	8,990	4,227	3,263	0
OTHER, N.E.C.	104,558	12,551	565	999	0
OTHER SCIENCES, N.E.C.	152,590	8,474	2,288	1,949	0

1/ DATA SHOWN FOR DOCTORATE-GRANTING INSTITUTIONS IN THIS NCES CLASSIFICATION OF INSTITUTIONS DIFFERS FROM THE CLASSIFICATION USED ELSEWHERE IN THIS REPORT. SEE TECHNICAL NOTES.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-16. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND INSTITUTIONAL CATEGORY: FY 1983

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	INSTITUTIONAL CATEGORY 1/				
	DOCTORATE GRANTING	COMPREHENSIVE	GENERAL BACCALAUREATE	PROFESSIONAL AND SPECIALIZED	2-YEAR
TOTAL	4,250,228	183,892	32,616	491,540	1,327
CHARACTER OF WORK:					
BASIC RESEARCH	3,068,993	111,418	16,848	334,901	1,327
APPLIED RESEARCH AND DEVELOPMENT	1,181,235	72,474	15,768	156,639	0
FIELD:					
ENGINEERING	639,546	34,869	384	60,528	0
AERONAUTICAL AND ASTRONAUTICAL	45,189	3,581	90	3,313	0
CHEMICAL	45,556	1,834	1	4,130	0
CIVIL	44,791	3,1[illegible]	0	9,683	0
ELECTRICAL	165,879	5,801	0	20,288	0
MECHANICAL	84,551	8,287	0	7,601	0
OTHER, N.E.C.	253,580	12,220	293	15,513	0
PHYSICAL SCIENCES	651,363	30,514	4,062	13,353	0
ASTRONOMY	49,528	614	197	0	0
CHEMISTRY	224,536	16,369	1,430	6,305	0
PHYSICS	319,353	12,749	1,847	6,709	0
OTHER, N.E.C.	57,946	882	38	339	0
ENVIRONMENTAL SCIENCES	355,769	16,316	9,881	43,468	1,327
ATMOSPHERIC	64,050	1,984	3,405	5,340	1,327
EARTH SCIENCES	109,396	7,514	1,389	16,033	0
OCEANOGRAPHY	153,042	2,937	3,820	11,657	0
OTHER, N.E.C.	29,281	3,879	1,267	10,438	0
MATHEMATICAL/COMPUTER SCIENCES	188,366	6,838	814	8,074	0
MATHEMATICS	68,449	3,731	220	2,856	0
COMPUTER SCIENCES	119,917	3,107	594	5,218	0
LIFE SCIENCES	2,124,403	75,235	12,392	356,484	0
AGRICULTURAL SCIENCES	229,247	28,502	5,673	517	0
BIOLOGICAL SCIENCES	819,554	35,017	6,035	121,267	0
MEDICAL SCIENCES	1,006,921	10,166	437	227,622	0
OTHER, N.E.C.	68,681	1,550	247	7,078	0
PSYCHOLOGY	80,694	6,654	1,193	2,501	0
SOCIAL SCIENCES	130,570	9,008	3,082	6,199	0
ECONOMICS	34,049	1,029	484	2,017	0
POLITICAL SCIENCE	18,476	899	300	599	0
SOCIOLOGY	34,606	3,155	1,970	3,121	0
OTHER, N.E.C.	43,439	3,925	326	592	0
OTHER SCIENCES, N.E.C.	79,517	4,458	800	973	0

1/ DATA SHOWN FOR DOCTORATE-GRANTING INSTITUTIONS IN THIS NCES CLASSIFICATION OF INSTITUTIONS DIFFERS FROM THE CLASSIFICATION USED ELSEWHERE IN THIS REPORT. SEE TECHNICAL NOTES.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-17. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS, CHARACTER OF WORK, SCIENCE/ENGINEERING FIELD, AND INSTITUTIONAL CATEGORY, FY 1983

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	INSTITUTIONAL CATEGORY 1/				
	DOCTORATE GRANTING	COMPREHENSIVE	GENERAL BACCALAUREATE	PROFESSIONAL AND SPECIALIZED	2-YEAR
TOTAL	2,323,798	160,545	32,536	268,522	0
SOURCE OF FUNDS:					
STATE AND LOCAL GOVERNMENTS	525,073	95,095	6,379	12,534	0
INDUSTRY	286,136	25,791	4,942	53,299	0
INSTITUTIONAL FUNDS	1,041,714	62,839	17,021	109,205	0
ALL OTHER SOURCES	470,835	16,860	4,184	93,484	0
CHARACTER OF WORK:					
BASIC RESEARCH	1,301,287	79,301	28,518	181,035	0
APPLIED RESEARCH AND DEVELOPMENT	932,471	81,244	4,008	87,497	0
FIELD:					
ENGINEERING	295,819	25,115	1,640	43,001	0
AERONAUTICAL AND ASTRONAUTICAL	10,839	644	3	1,352	0
CHEMICAL	30,313	3,284	0	3,833	0
CIVIL	39,123	1,603	733	7,823	0
ELECTRICAL	49,736	2,962	1	12,633	0
MECHANICAL	37,001	3,573	0	6,529	0
OTHER, N.E.C.	128,807	13,049	903	10,831	0
PHYSICAL SCIENCES	160,976	18,917	1,786	9,055	0
ASTRONOMY	23,531	317	7	6	0
CHEMISTRY	69,332	11,771	1,431	4,329	0
PHYSICS	56,345	5,646	282	4,402	0
OTHER, N.E.C.	11,768	1,183	66	318	0
ENVIRONMENTAL SCIENCES	147,925	14,095	12,592	16,753	0
ATMOSPHERIC	12,748	1,191	3,569	4,129	0
EARTH SCIENCES	68,317	4,634	1,505	4,216	0
OCEANOGRAPHY	40,237	2,929	5,495	4,622	0
OTHER, N.E.C.	26,623	5,336	2,023	3,786	0
MATHEMATICAL/COMPUTER SCIENCES	62,344	5,806	1,231	4,765	0
MATHEMATICS	21,895	2,305	590	1,341	0
COMPUTER SCIENCES	40,449	3,501	641	3,424	0
LIFE SCIENCES	1,373,462	67,843	9,394	190,466	0
AGRICULTURAL SCIENCES	592,249	31,499	4,090	1,120	0
BIOLOGICAL SCIENCES	328,130	26,863	4,690	50,426	0
MEDICAL SCIENCES	418,367	7,485	431	126,657	0
OTHER, N.E.C.	34,726	1,996	223	12,263	0
PSYCHOLOGY	41,380	3,049	472	1,227	0
SOCIAL SCIENCES	168,779	21,706	3,931	2,279	0
ECONOMICS	50,923	4,131	658	1,335	0
POLITICAL SCIENCE	30,954	3,112	777	395	0
SOCIOLOGY	25,783	5,835	2,257	142	0
OTHER, N.E.C.	61,119	8,626	239	407	0
OTHER SCIENCES, N.E.C.	73,073	4,016	1,480	976	0

1/ DATA SHOWN FOR DOCTORATE-GRANTING INSTITUTIONS IN THIS NCES CLASSIFICATION OF INSTITUTIONS DIFFERS FROM THE CLASSIFICATION USED ELSEWHERE IN THIS REPORT. SEE TECHNICAL NOTES.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-18. -- R&D EXPENDITURES AT HISTORICALLY BLACK COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83 1/

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1976	1977	1979	1980	1981	1982	1983
TOTAL	21,114	22,159	31,673	40,851	49,391	57,311	61,685
SOURCE OF FUNDS:							
FEDERAL GOVERNMENT	18,152	19,065	27,016	33,792	39,958	43,672	46,399
STATE AND LOCAL GOVERNMENTS	765	888	1,700	1,982	3,019	5,469	6,265
INDUSTRY	241	181	568	968	882	1,047	1,025
INSTITUTIONAL FUNDS	1,432	1,224	1,471	2,265	4,083	4,989	5,295
ALL OTHER SOURCES	724	801	920	1,844	1,849	2,134	2,701
CHARACTER OF WORK:							
BASIC RESEARCH	10,376	10,797	20,403	26,481	32,134	41,270	41,397
APPLIED RESEARCH AND DEVELOPMENT	7,738	11,362	11,272	14,370	17,257	16,041	20,288
FIELD:							
ENGINEERING 2/	903	621	1,716	1,676	2,485	2,990	2,757
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	46	242	439	174
CHEMICAL	-	-	-	49	47	33	32
CIVIL	-	-	-	122	392	523	483
ELECTRICAL	-	-	-	305	1,025	904	1,243
MECHANICAL	-	-	-	337	590	469	381
OTHER, N.E.C.	-	-	-	817	189	222	444
PHYSICAL SCIENCES	2,823	2,399	4,044	5,244	6,981	7,957	9,215
ASTRONOMY	23	35	164	235	155	196	166
CHEMISTRY	1,844	1,616	3,024	3,923	5,393	5,985	6,678
PHYSICS	708	563	750	588	998	1,142	1,724
OTHER, N.E.C.	248	185	106	498	435	634	647
ENVIRONMENTAL SCIENCES 2/	574	617	539	771	2,104	2,790	3,105
ATMOSPHERIC	-	-	-	2	48	95	58
EARTH SCIENCES	-	-	-	583	1,029	1,161	1,380
OCEANOGRAPHY	-	-	-	64	281	288	284
OTHER, N.E.C.	-	-	-	122	746	1,286	1,363
MATHEMATICAL/COMPUTER SCIENCES	523	741	606	964	1,457	2,140	2,399
MATHEMATICS	303	363	388	584	1,026	1,522	1,618
COMPUTER SCIENCES	220	378	218	380	431	618	741
LIFE SCIENCES	12,271	14,253	20,195	25,845	29,547	34,501	36,690
AGRICULTURAL SCIENCES	5,010	5,137	8,676	9,998	13,208	14,057	17,532
BIOLOGICAL SCIENCES	3,347	4,904	4,490	8,307	9,781	11,891	12,696
MEDICAL SCIENCES	3,270	4,139	3,150	3,321	2,450	2,960	[illegible]
OTHER, N.E.C.	644	73	1,879	4,219	4,108	5,594	3,497
PSYCHOLOGY	553	97	324	477	579	825	987
SOCIAL SCIENCES	2,513	2,135	3,644	5,395	5,210	4,761	5,062
ECONOMICS	208	434	1,041	797	1,311	686	600
POLITICAL SCIENCE	667	272	644	1,201	907	1,101	1,116
SOCIOLOGY	801	702	851	1,947	1,252	1,209	1,110
OTHER, N.E.C.	837	727	1,075	1,250	1,740	1,765	2,236
OTHER SCIENCES, N.E.C.	1,554	1,296	644	579	1,028	1,747	1,950

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-19. — FEDERALLY FINANCED R&D EXPENDITURES AT HISTORICALLY BLACK COLLEGES, BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83 1/

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1976	1977	1979	1980	1981	1982	1983
TOTAL	18,152	19,065	27,016	33,792	39,558	43,672	46,399
CHARACTER OF WORK:							
BASIC RESEARCH	11,781	9,288	17,638	22,101	27,002	33,012	33,601
APPLIED RESEARCH AND DEVELOPMENT	6,371	9,777	9,378	11,691	12,556	10,660	12,798
FIELD:							
ENGINEERING 2/	410	483	1,231	1,078	2,234	2,262	2,216
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	46	241	438	174
CHEMICAL	-	-	-	45	46	33	21
CIVIL	-	-	-	26	351	437	431
ELECTRICAL	-	-	-	166	936	792	970
MECHANICAL	-	-	-	277	521	398	284
OTHER, N.E.C.	-	-	-	518	139	164	336
PHYSICAL SCIENCES	2,443	2,009	3,517	4,549	5,621	6,[illegible]	6,860
ASTRONOMY	21	31	164	234	149	186	160
CHEMISTRY	1,638	1,297	2,554	3,320	4,324	4,787	5,144
PHYSICS	629	517	715	548	861	975	1,494
OTHER, N.E.C.	155	164	84	447	287	79	60
ENVIRONMENTAL SCIENCES 2/	524	552	528	675	1,555	1,720	1,822
ATMOSPHERIC	-	-	-	0	32	35	41
EARTH SCIENCES	-	-	-	537	818	912	1,088
OCEANOGRAPHY	-	-	-	47	183	168	169
OTHER, N.E.C.	-	-	-	91	522	602	524
MATHEMATICAL/COMPUTER SCIENCES	219	353	177	386	700	745	760
MATHEMATICS	109	96	135	227	584	590	533
COMPUTER SCIENCES	110	257	42	159	116	155	227
LIFE SCIENCES	10,909	12,811	17,555	22,516	25,636	29,786	31,676
AGRICULTURAL SCIENCES	4,615	4,494	8,033	9,578	12,375	13,012	16,422
BIOLOGICAL SCIENCES	3,067	4,616	5,450	7,267	8,086	10,122	9,792
MEDICAL SCIENCES	2,872	3,637	2,38[illegible]	2,774	2,173	2,555	3,207
OTHER, N.E.C.	355	64	1,688	2,897	3,002	4,097	2,255
PSYCHOLOGY	543	90	313	[illegible]	328	543	269
SOCIAL SCIENCES	1,648	1,550	3,076	3,748	2,818	2,072	2,178
ECONOMICS	187	424	1,047	952	981	359	298
POLITICAL SCIENCE	140	90	472	200	169	335	428
SOCIOLOGY	632	577	624	1,618	691	686	512
OTHER, N.E.C.	689	459	933	978	977	692	940
OTHER SCIENCES, N.E.C.	1,456	1,217	619	5[illegible]	666	517	618

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-20. — NON-FEDERAL R&D EXPENDITURES AT HISTORICALLY BLACK COLLEGES, BY SOURCE OF FUNDS, CHARACTER OF WORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83 1/

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1976	1977	1979	1980	1981	1982	1983
TOTAL NON-FEDERAL	3,162	3,094	4,659	7,059	9,833	13,639	15,286
SOURCE OF FUNDS:							
STATE AND LOCAL GOVERNMENTS	765	888	1,700	1,982	3,019	5,469	6,265
INDUSTRY	241	181	568	968	882	1,047	1,025
INSTITUTIONAL FUNDS	1,432	1,224	1,471	2,265	4,083	4,989	5,295
ALL OTHER SOURCES	724	801	920	1,844	1,849	2,134	2,701
CHARACTER OF WORK:							
BASIC RESEARCH	1,795	1,509	2,765	4,380	5,132	8,258	7,796
APPLIED RESEARCH AND DEVELOPMENT	1,367	1,585	1,894	2,679	4,701	5,381	7,490
FIELD:							
ENGINEERING 2/	93	138	485	598	251	328	541
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	0	1	1	0
CHEMICAL	-	-	-	4	1	0	11
CIVIL	-	-	-	96	41	86	32
ELECTRICAL	-	-	-	139	89	112	273
MECHANICAL	-	-	-	60	69	71	97
OTHER, N.E.C.	-	-	-	299	50	58	108
PHYSICAL SCIENCES	380	390	527	695	1,[illegible]	1,930	2,395
ASTRONOMY	2	4	0	1	6	10	6
CHEMISTRY	206	319	470	603	1,069	1,198	1,532
PHYSICS	79	46	35	40	137	167	230
OTHER, N.E.C.	93	21	22	51	148	555	587
ENVIRONMENTAL SCIENCES 2/	50	65	11	96	549	1,070	1,283
ATMOSPHERIC	-	-	-	2	16	17	17
EARTH SCIENCES	-	-	-	46	211	249	292
OCEANOGRAPHY	-	-	-	17	98	120	135
OTHER, N.E.C.	-	-	-	31	224	684	839
MATHEMATICAL/COMPUTER SCIENCES	304	388	429	578	757	1,395	1,599
MATHEMATICS	194	267	253	357	442	932	1,085
COMPUTER SCIENCES	110	121	176	221	315	463	514
LIFE SCIENCES	1,362	1,442	2,600	3,329	3,911	4,715	4,974
AGRICULTURAL SCIENCES	395	643	643	420	833	1,045	1,110
BIOLOGICAL SCIENCES	280	288	1,040	1,040	1,695	1,769	1,904
MEDICAL SCIENCES	398	502	766	547	277	405	718
OTHER, N.E.C.	289	9	151	1,322	1,106	1,496	1,242
PSYCHOLOGY	10	7	13	50	251	282	318
SOCIAL SCIENCES	865	585	569	1,647	2,392	2,689	2,[illegible]
ECONOMICS	21	10	0	45	330	327	302
POLITICAL SCIENCE	527	182	194	1,001	738	7[illegible]	688
SOCIOLOGY	169	125	233	329	561	523	998
OTHER, N.E.C.	148	268	142	272	763	1,073	1,296
OTHER SCIENCES, N.E.C.	98	79	25	66	362	1,230	1,332

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-21. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY GEOGRAPHIC DISTRIBUTION: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	1976	1977	1978 1/	1979	1980	1981	1982	1983
TOTAL, ALL INSTITUTIONS ...	3,729,007	4,066,953	4,540,256	5,361,408	6,060,118	6,818,343	7,260,636	7,744,954
NEW ENGLAND ...	361,316	403,153	452,420	525,155	590,176	690,962	732,073	779,493
CONNECTICUT ...	71,995	79,348	89,078	105,428	118,198	140,045	152,207	164,897
MAINE ...	9,622	9,937	11,022	12,593	14,902	17,874	19,223	19,984
MASSACHUSETTS ...	239,793	265,490	298,231	344,984	386,509	445,596	469,712	497,579
NEW HAMPSHIRE ...	11,963	13,705	16,332	17,890	19,690	27,451	27,687	30,301
RHODE ISLAND ...	16,166	21,543	24,121	30,229	34,897	41,240	44,349	47,990
VERMONT ...	12,167	13,130	13,636	14,031	15,980	18,756	18,903	19,142
MIDDLE ATLANTIC ...	656,778	704,531	790,382	872,943	979,391	1,086,375	1,189,613	1,270,496
NEW JERSEY ...	94,321	99,040	68,387	76,955	89,500	96,387	105,077	114,672
NEW YORK ...	409,314	443,450	482,103	546,551	613,234	671,638	739,904	786,335
PENNSYLVANIA ...	187,143	202,041	239,892	249,437	280,657	318,350	344,632	369,489
EAST NORTH CENTRAL ...	586,745	628,790	712,355	815,364	904,885	1,006,633	1,025,479	1,094,876
ILLINOIS ...	162,512	174,328	198,715	218,253	238,817	268,251	282,523	314,227
INDIANA ...	68,632	69,735	79,991	89,789	101,532	121,743	123,427	133,746
MICHIGAN ...	137,823	146,973	171,295	200,295	217,297	236,236	226,445	250,118
OHIO ...	108,391	121,230	136,891	162,108	183,369	202,383	204,106	196,775
WISCONSIN ...	109,387	116,524	125,463	144,919	163,870	178,022	188,978	200,010
WEST NORTH CENTRAL ...	292,440	321,789	354,444	401,641	448,895	494,634	535,735	561,429
IOWA ...	52,374	60,830	67,257	81,264	94,987	103,409	111,011	119,924
KANSAS ...	34,334	36,939	38,169	43,215	49,474	55,429	56,449	58,432
MINNESOTA ...	75,536	83,088	94,706	106,547	119,471	133,430	146,885	156,753
MISSOURI ...	81,309	88,176	96,747	104,831	113,375	123,835	130,182	136,461
NEBRASKA ...	28,305	30,820	34,706	40,746	42,893	47,806	53,096	53,834
NORTH DAKOTA ...	12,790	13,526	14,070	15,424	17,963	20,715	26,433	25,269
SOUTH DAKOTA ...	7,792	8,410	8,789	9,614	10,732	10,010	11,679	10,756
SOUTH ATLANTIC ...	491,284	536,098	576,871	836,425	940,638	1,043,889	1,111,453	1,170,928
DELAWARE ...	7,520	9,925	11,575	14,363	16,746	17,202	17,875	19,080
DISTRICT OF COLUMBIA ...	37,248	41,147	45,506	48,938	56,576	54,928	62,709	58,554
FLORIDA ...	98,401	105,002	107,629	120,447	140,151	162,244	167,905	171,695
GEORGIA ...	77,691	84,106	100,308	119,855	136,651	154,686	170,495	189,763
MARYLAND ...	95,242	104,490	112,697	289,748	318,213	340,572	350,946	372,280
NORTH CAROLINA ...	92,330	99,380	101,864	122,674	133,628	158,297	165,723	180,848
SOUTH CAROLINA ...	19,939	21,813	23,452	30,490	34,346	36,781	47,910	48,511
VIRGINIA ...	51,012	58,551	62,765	74,453	86,706	99,281	106,073	115,604
WEST VIRGINIA ...	11,901	11,684	11,075	15,457	17,621	19,898	21,817	14,993
EAST SOUTH CENTRAL ...	130,820	141,414	160,508	188,644	203,521	240,152	248,513	255,152
ALABAMA ...	37,870	42,340	45,734	55,913	60,534	67,811	70,778	70,549
KENTUCKY ...	22,938	27,620	33,148	37,994	38,512	43,894	48,104	52,174
MISSISSIPPI ...	26,195	25,445	29,563	35,119	40,302	46,990	50,203	49,833
TENNESSEE ...	43,817	46,009	52,063	59,618	64,173	81,457	79,428	82,596
WEST SOUTH CENTRAL ...	288,372	320,340	375,359	441,680	504,460	584,158	637,752	702,262
ARKANSAS ...	16,000	16,789	20,605	28,247	30,283	30,316	35,948	31,472
LOUISIANA ...	43,053	45,279	57,230	63,354	74,152	88,839	97,505	99,626
OKLAHOMA ...	23,156	26,289	30,579	35,081	48,167	67,876	70,984	85,163
TEXAS ...	206,163	231,983	266,945	314,998	351,858	397,127	433,315	486,001
MOUNTAIN ...	221,211	243,022	277,067	334,962	382,014	437,118	465,261	508,819
ARIZONA ...	37,198	41,827	49,805	67,125	77,163	91,600	101,075	112,640
COLORADO ...	73,308	77,519	86,832	104,564	123,008	135,502	136,939	141,993
IDAHO ...	13,704	15,215	13,442	13,985	14,434	21,607	17,865	17,751
MONTANA ...	13,254	14,168	15,548	17,993	18,309	20,505	20,272	24,101
NEVADA ...	9,404	9,043	10,500	12,616	13,933	11,917	18,440	22,552
NEW MEXICO ...	24,437	29,386	38,501	51,614	58,330	67,286	74,086	85,442
UTAH ...	40,789	44,792	52,279	57,297	65,788	75,232	81,962	88,801
WYOMING ...	9,117	11,072	10,160	9,768	11,049	13,469	14,622	15,119
PACIFIC ...	691,829	752,459	825,466	926,323	1,085,111	1,209,770	1,288,737	1,372,280
ALASKA ...	28,748	35,175	39,367	36,947	42,154	36,652	38,218	37,325
CALIFORNIA ...	500,756	537,838	585,822	662,485	784,051	890,909	946,762	1,022,613
HAWAII ...	28,049	28,900	31,971	35,703	40,593	42,997	43,439	45,401
OREGON ...	47,081	51,530	56,129	62,884	72,307	80,020	89,975	96,129
WASHINGTON ...	87,195	99,016	112,177	128,304	146,006	159,192	170,343	170,812
OUTLYING AREAS ...	14,212	15,357	15,384	18,271	21,027	24,652	26,020	29,219

1/ DATA WERE COLLECTED ONLY FROM DOCTORATE-GRANTING INSTITUTIONS.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-27. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	1976	1977	1978 1/	1979	1980	1981	1982	1983
TOTAL, ALL INSTITUTIONS ...	2,511,867	2,726,126	3,004,930	3,595,271	4,093,586	4,559,049	4,749,264	4,959,603
NEW ENGLAND	281,722	312,537	358,011	414,806	467,956	540,758	559,411	593,790
CONNECTICUT	53,780	58,917	68,860	80,461	92,553	109,088	113,484	124,230
MAINE	4,080	4,171	5,392	6,369	6,020	7,744	8,331	8,456
MASSACHUSETTS	191,615	210,723	240,439	279,354	313,881	354,796	368,394	388,924
NEW HAMPSHIRE	9,038	9,547	11,431	13,085	14,640	19,226	19,568	20,276
RHODE ISLAND	14,173	19,361	21,731	25,133	29,222	36,490	36,745	39,054
VERMONT	9,036	9,818	10,158	10,204	11,640	13,404	12,889	12,850
MIDDLE ATLANTIC	452,972	484,197	538,386	590,063	661,608	756,905	807,983	844,547
NEW JERSEY	32,553	34,847	40,846	44,692	51,243	59,530	61,513	60,570
NEW YORK	294,065	315,084	334,141	372,476	419,149	469,684	506,593	533,039
PENNSYLVANIA	126,354	134,266	163,399	172,895	197,216	227,691	239,877	250,938
EAST NORTH CENTRAL	377,901	403,576	446,910	511,367	585,487	647,713	655,031	681,115
ILLINOIS	116,558	127,336	134,862	147,669	168,204	186,405	190,779	205,744
INDIANA	45,802	47,360	55,131	60,466	68,461	80,341	81,978	82,705
MICHIGAN	78,115	84,453	99,129	112,110	127,917	136,496	131,903	145,841
OHIO	68,179	73,119	80,770	102,198	118,644	132,731	134,120	130,342
WISCONSIN	68,847	71,308	77,018	88,924	102,261	111,738	116,451	115,483
WEST NORTH CENTRAL	160,379	176,229	187,814	208,978	245,375	268,873	278,114	284,469
IOWA	26,769	31,234	34,217	40,960	50,687	54,515	57,080	61,663
KANSAS	17,330	18,998	15,497	17,371	25,737	29,513	24,666	24,913
MINNESOTA	45,238	48,628	53,265	61,398	68,690	78,031	83,223	86,121
MISSOURI	52,097	56,434	60,646	64,292	71,010	77,693	80,659	81,000
NEBRASKA	10,853	11,905	14,587	14,435	17,499	17,133	18,701	17,151
NORTH DAKOTA	4,791	5,722	5,666	6,307	6,889	8,040	9,904	9,424
SOUTH DAKOTA	3,201	3,308	3,936	4,215	4,863	3,948	3,881	4,197
SOUTH ATLANTIC	317,240	340,217	365,417	397,794	457,691	731,756	774,879	815,739
DELAWARE	4,348	5,544	6,787	8,117	9,180	9,413	9,540	9,583
DISTRICT OF COLUMBIA	28,685	30,442	35,282	35,946	39,954	40,382	47,344	44,372
FLORIDA	56,008	55,836	59,642	71,927	73,338	91,536	87,916	88,067
GEORGIA	38,403	43,297	50,587	62,786	71,572	80,923	86,935	101,363
MARYLAND	73,928	78,841	86,322	260,672	283,458	303,806	321,067	339,103
NORTH CAROLINA	65,335	69,284	66,931	82,010	94,046	108,809	116,968	124,930
SOUTH CAROLINA	8,958	11,084	10,998	15,655	18,123	19,274	25,589	25,394
VIRGINIA	33,742	39,437	42,388	51,833	58,713	66,596	68,592	75,141
WEST VIRGINIA	7,833	6,452	6,480	8,848	9,307	11,017	10,928	7,786
EAST SOUTH CENTRAL	80,612	84,353	96,374	104,056	116,037	138,537	137,334	132,106
ALABAMA	26,515	27,965	30,376	34,121	39,116	45,234	46,476	43,201
KENTUCKY	11,059	11,832	19,647	16,782	17,944	19,066	20,160	19,734
MISSISSIPPI	10,381	10,711	10,721	12,849	15,797	18,409	17,914	16,534
TENNESSEE	32,657	33,845	35,630	40,304	43,240	55,828	52,784	52,637
WEST SOUTH CENTRAL	161,721	187,996	203,806	240,433	277,501	305,966	321,213	335,067
ARKANSAS	6,639	7,807	7,889	7,677	9,328	9,427	12,382	13,117
LOUISIANA	18,603	19,460	18,829	24,095	29,001	36,032	36,440	34,486
OKLAHOMA	12,952	14,434	14,834	14,778	24,005	22,491	25,273	26,469
TEXAS	123,527	142,295	162,254	193,923	215,167	238,016	247,118	260,995
MOUNTAIN	150,395	161,163	183,660	219,328	258,284	289,807	302,213	310,225
ARIZONA	20,461	23,017	26,208	36,255	41,876	51,089	52,395	55,432
COLORADO	56,051	57,891	65,048	76,337	92,540	100,837	101,841	97,874
IDAHO	5,834	6,560	5,898	6,554	6,942	9,871	12,625	11,726
MONTANA	7,046	7,593	7,829	8,268	9,657	11,227	9,639	8,971
NEVADA	2,851	4,207	4,227	5,584	6,654	6,780	8,975	10,682
NEW MEXICO	20,218	22,942	29,753	37,842	46,484	49,817	53,285	59,441
UTAH	31,937	31,703	38,542	42,690	47,928	53,337	56,034	59,518
WYOMING	5,957	7,250	6,155	5,798	6,233	6,849	7,319	6,971
PACIFIC	522,873	572,487	617,254	698,616	806,378	866,751	900,522	948,840
ALASKA	18,429	24,664	26,591	25,431	26,587	18,995	19,095	11,859
CALIFORNIA	396,007	424,321	451,132	515,369	602,736	656,672	677,912	724,798
HAWAII	17,578	17,945	19,781	22,500	25,833	25,153	26,616	27,633
OREGON	30,930	32,890	34,975	39,311	45,099	49,269	53,485	58,198
WASHINGTON	59,929	72,667	84,775	96,005	106,123	116,662	123,454	122,952
OUTLYING AREAS	6,992	7,271	7,298	9,830	11,269	11,985	12,564	13,707

1/ DATA WERE COLLECTED ONLY FROM DOCTORATE-GRANTING INSTITUTIONS.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-23. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES
BY GEOGRAPHIC DISTRIBUTION AND SOURCE OF FUNDS: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FEDERAL GOVERNMENT	STATE AND LOCAL GOVERNMENTS	INDUSTRY	INSTITUTIONAL FUNDS	ALL OTHER SOURCES
TOTAL, ALL INSTITUTIONS ...	7,744,954	4,999,603	599,042	370,168	1,230,779	585,363
NEW ENGLAND	779,493	593,790	28,430	40,610	55,935	66,728
CONNECTICUT	164,897	124,230	4,151	3,078	20,893	12,545
MAINE	19,984	8,456	3,520	1,532	5,657	819
MASSACHUSETTS	497,579	388,924	5,735	32,235	21,682	49,003
NEW HAMPSHIRE	30,301	20,276	1,939	573	4,281	3,212
RHODE ISLAND	47,590	39,054	5,740	1,527	869	400
VERMONT	19,142	12,850	1,325	1,665	2,553	749
MIDDLE ATLANTIC	1,270,496	844,547	46,318	70,561	184,011	125,059
NEW JERSEY	114,672	60,570	8,299	3,082	31,787	10,974
NEW YORK	786,335	533,039	33,443	34,215	103,200	82,438
PENNSYLVANIA	369,489	250,938	4,616	33,264	49,024	31,647
EAST NORTH CENTRAL	1,094,876	681,115	90,029	53,572	190,952	79,208
ILLINOIS	314,227	205,744	12,889	11,793	63,561	20,240
INDIANA	133,746	83,705	10,509	13,085	20,682	5,765
MICHIGAN	290,118	145,841	18,776	9,421	57,815	58,265
OHIO	196,775	130,342	10,811	12,748	21,226	21,648
WISCONSIN	200,010	115,483	37,044	6,525	27,668	13,290
WEST NORTH CENTRAL	561,429	284,469	77,528	23,720	138,112	37,600
IOWA	119,924	61,663	17,590	4,467	31,179	5,025
KANSAS	58,432	24,913	19,773	1,301	9,457	2,988
MINNESOTA	156,753	86,121	15,708	4,904	33,726	16,214
MISSOURI	135,461	81,000	9,752	8,651	27,789	9,269
NEBRASKA	53,834	17,151	2,120	2,611	28,863	3,089
NORTH DAKOTA	25,269	9,424	12,093	1,073	2,496	183
SOUTH DAKOTA	10,756	4,197	492	633	4,602	832
SOUTH ATLANTIC	1,170,928	815,739	81,914	58,074	164,363	50,838
DELAWARE	19,080	9,583	837	3,075	4,502	1,083
DISTRICT OF COLUMBIA	58,554	44,372	394	1,455	6,124	6,209
FLORIDA	171,695	88,067	10,578	10,253	51,840	10,857
GEORGIA	189,763	101,363	3,355	20,237	61,831	2,977
MARYLAND	372,280	339,103	6,580	1,540	9,866	15,191
NORTH CAROLINA	180,848	124,930	32,758	7,590	9,788	5,782
SOUTH CAROLINA	48,511	25,394	8,989	3,238	8,455	2,435
VIRGINIA	115,604	75,141	17,587	10,066	7,156	5,654
WEST VIRGINIA	14,593	7,786	836	520	4,801	650
EAST SOUTH CENTRAL	188,152	132,106	34,716	16,417	56,937	14,976
ALABAMA	70,959	43,201	10,566	5,530	4,770	6,482
KENTUCKY	52,174	19,734	13,271	3,358	15,180	631
MISSISSIPPI	49,833	16,534	1,244	2,039	27,562	2,454
TENNESSEE	82,596	52,637	9,636	5,490	9,425	5,409
WEST SOUTH CENTRAL	702,262	325,067	97,972	37,739	161,057	70,427
ARKANSAS	31,472	13,117	8,062	1,778	6,694	1,821
LOUISIANA	99,626	34,486	29,364	5,108	22,824	7,844
OKLAHOMA	85,163	26,469	2,748	5,292	49,944	710
TEXAS	486,001	260,995	57,798	25,561	81,595	60,052
MOUNTAIN	508,819	310,225	59,936	37,801	70,040	30,817
ARIZONA	112,660	55,452	22,313	9,555	19,997	5,343
COLORADO	141,993	97,874	8,257	11,727	14,560	9,575
IDAHO	17,751	11,726	1,882	2,260	1,191	692
MONTANA	24,101	8,971	6,404	1,611	7,115	0
NEVADA	22,952	10,652	785	2,774	4,792	3,949
NEW MEXICO	85,442	59,441	10,699	3,898	4,653	6,751
UTAH	88,801	59,518	9,056	1,236	11,494	4,497
WYOMING	15,119	6,591	540	1,740	6,238	10
PACIFIC	1,372,280	948,840	80,791	31,644	201,727	109,278
ALASKA	37,225	13,859	4,450	3,143	14,649	1,224
CALIFORNIA	1,022,613	726,798	20,922	14,874	176,241	83,778
HAWAII	45,401	27,633	15,441	723	1,199	445
OREGON	96,129	58,198	14,575	4,989	7,679	10,688
WASHINGTON	170,812	122,352	25,403	7,915	1,999	13,143
OUTLYING AREAS	29,219	13,705	7,407	30	7,645	432

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-24. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS ...	7,744,954	1,100,902	890,026	618,126	278,238	4,209,679	137,170	345,512	165,301
NEW ENGLAND ...	779,493	124,689	126,412	88,894	26,521	354,688	16,913	31,410	9,966
CONNECTICUT ...	164,897	10,299	17,628	2,698	4,704	118,453	5,725	5,382	8
MAINE ...	19,984	2,865	1,233	4,341	425	7,995	438	1,700	987
MASSACHUSETTS ...	497,579	99,516	97,983	60,494	18,376	182,902	9,744	22,285	6,279
NEW HAMPSHIRE ...	30,301	2,715	4,634	2,494	187	17,523	212	130	2,406
RHODE ISLAND ...	47,590	8,853	3,967	18,862	2,736	11,063	563	1,546	0
VERMONT ...	19,142	441	967	5	93	16,752	231	317	286
MIDDLE ATLANTIC ...	1,279,496	161,704	138,289	61,524	58,208	742,928	27,051	64,174	16,618
NEW JERSEY ...	114,672	17,127	17,682	8,846	6,335	45,986	5,649	9,840	3,207
NEW YORK ...	786,335	80,285	83,389	40,659	24,349	504,915	17,479	30,519	4,720
PENNSYLVANIA ...	369,489	64,292	37,218	12,019	27,524	192,027	3,923	23,715	8,691
EAST NORTH CENTRAL ...	1,094,876	169,785	141,173	46,232	29,086	573,949	30,260	66,954	37,435
ILLINOIS ...	314,227	39,530	47,787	16,828	9,994	160,464	6,142	17,652	15,830
INDIANA ...	133,746	27,970	26,280	1,488	3,254	62,747	3,137	5,710	3,160
MICHIGAN ...	250,118	31,805	28,447	7,925	4,371	138,350	10,902	27,058	1,460
OHIO ...	196,775	48,020	19,706	3,107	3,984	101,249	3,694	4,547	12,468
WISCONSIN ...	200,010	22,460	18,953	16,884	7,483	111,139	6,785	11,987	4,317
WEST NORTH CENTRAL ...	561,429	56,078	37,007	20,402	13,936	386,101	12,010	20,344	15,554
IOWA ...	119,924	17,167	10,186	776	6,176	75,746	1,160	4,325	4,378
KANSAS ...	58,432	6,201	2,852	3,363	466	29,891	5,165	2,191	8,302
MINNESOTA ...	156,753	13,957	10,826	3,363	2,473	117,734	3,795	3,110	1,495
MISSOURI ...	136,461	12,722	7,422	4,403	4,351	100,264	1,446	5,146	707
NEBRASKA ...	53,834	3,278	4,820	5,401	462	37,165	409	1,859	490
NORTH DAKOTA ...	25,269	1,738	655	1,784	1	18,776	6	2,309	0
SOUTH DAKOTA ...	10,756	1,015	246	1,312	7	6,525	29	1,460	182
SOUTH ATLANTIC ...	1,170,928	228,310	138,189	93,015	80,676	555,728	13,590	42,086	19,364
DELAWARE ...	19,080	4,814	2,236	3,575	514	4,588	218	700	2,435
DISTRICT OF COLUMBIA ...	58,554	6,218	6,182	389	2,731	33,519	825	3,461	5,329
FLORIDA ...	171,695	23,248	12,761	25,088	6,866	88,841	3,332	7,124	4,535
GEORGIA ...	189,763	62,313	11,329	6,952	10,179	82,983	2,181	12,493	1,333
MARYLAND ...	372,280	88,498	77,985	37,212	52,902	103,058	1,438	5,870	5,317
NORTH CAROLINA ...	180,848	16,105	10,820	9,721	3,822	130,661	3,696	5,919	104
SOUTH CAROLINA ...	48,511	4,925	5,054	3,746	1,177	30,836	933	1,733	107
VIRGINIA ...	115,604	19,508	10,833	5,844	2,346	72,294	908	3,667	204
WEST VIRGINIA ...	14,593	2,681	989	488	139	8,948	59	1,319	0
EAST SOUTH CENTRAL ...	295,192	29,250	13,544	4,859	2,088	191,207	2,889	9,622	1,693
ALABAMA ...	70,549	8,272	2,785	43	324	58,776	16	163	170
KENTUCKY ...	52,174	9,239	1,264	907	371	38,163	568	983	679
MISSISSIPPI ...	49,813	4,721	2,654	626	142	39,088	157	1,915	570
TENNESSEE ...	82,596	7,018	6,841	3,283	1,251	55,180	2,188	6,561	274
WEST SOUTH CENTRAL ...	702,262	86,811	64,233	44,624	16,904	423,348	4,422	30,791	31,129
ARKANSAS ...	31,472	2,844	2,279	273	1,224	22,009	128	1,788	888
LOUISIANA ...	99,626	8,547	5,563	6,838	2,390	72,598	185	3,455	50
OKLAHOMA ...	85,163	17,086	6,926	6,466	3,952	41,126	677	6,722	2,208
TEXAS ...	486,001	58,294	49,465	31,048	9,338	287,615	3,432	18,826	27,983
MOUNTAIN ...	508,819	84,023	63,207	66,777	17,321	231,019	6,642	31,284	6,546
ARIZONA ...	112,660	13,564	25,841	15,645	1,375	44,699	1,503	8,205	1,828
COLORADO ...	141,993	22,053	18,996	14,297	1,881	67,665	3,362	11,997	1,742
IDAHO ...	17,751	1,679	325	843	37	13,887	2	978	0
MONTANA ...	24,191	2,111	2,056	1,212	157	16,680	405	1,226	254
NEVADA ...	22,992	869	379	8,623	34	11,557	96	1,394	0
NEW MEXICO ...	85,442	32,952	3,926	6,213	10,902	26,085	741	4,622	1
UTAH ...	88,801	11,354	9,628	17,810	2,740	42,723	366	2,011	2,169
WYOMING ...	15,119	1,441	2,056	2,134	195	7,723	167	851	552
PACIFIC ...	1,372,280	157,777	166,533	190,358	32,628	728,172	23,290	47,403	26,116
ALASKA ...	37,325	1,923	0	20,594	236	10,700	0	2,387	1,485
CALIFORNIA ...	1,022,613	138,974	136,773	120,888	28,444	539,221	19,850	34,926	3,537
HAWAII ...	45,401	1,561	9,432	12,861	137	15,020	0	1,525	4,865
OREGON ...	96,129	3,813	10,773	18,641	872	57,388	1,180	2,976	486
WASHINGTON ...	170,812	11,506	9,555	17,374	2,939	105,843	2,260	5,592	15,743
OUTLYING AREAS ...	29,219	475	1,419	1,441	870	22,539	103	1,442	880

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-25. — PERCENT DISTRIBUTION OF R&D EXPENDITURES BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS AND SOURCE OF FUNDS: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	7,744,954	4,959,603	599,041	370,168	1,230,779	585,363
			PERCENT DISTRIBUTION			
TOTAL, 1ST 10 INSTS.	21.6	25.2	14.9	15.0	13.1	20.7
TOTAL, 1ST 20 INSTS.	35.3	39.3	25.4	23.7	26.9	36.7
TOTAL, 1ST 30 INSTS.	45.7	49.4	36.1	36.1	38.0	46.2
TOTAL, 1ST 40 INSTS.	54.0	56.5	51.5	45.7	47.3	54.1
TOTAL, 1ST 50 INSTS.	60.6	63.8	53.6	50.9	54.4	60.2
TOTAL, 1ST 60 INSTS.	66.4	69.1	58.5	56.7	62.2	66.4
TOTAL, 1ST 70 INSTS.	71.6	73.7	66.6	64.2	69.4	68.9
TOTAL, 1ST 80 INSTS.	76.2	77.5	74.7	67.6	75.7	73.5
TOTAL, 1ST 90 INSTS.	79.8	81.4	78.1	71.5	77.5	77.9
TOTAL, 1ST 100 INSTS.	82.8	84.4	80.1	74.8	80.9	81.1
TOTAL, 1ST 110 INSTS.	85.4	86.6	84.6	78.6	83.7	83.4
TOTAL, 1ST 120 INSTS.	87.6	88.5	88.5	81.9	85.5	87.0
TOTAL, 1ST 130 INSTS.	89.5	90.1	90.9	83.8	88.0	89.3
TOTAL, 1ST 140 INSTS.	91.2	91.7	91.3	85.5	90.4	91.4
TOTAL, 1ST 150 INSTS.	92.6	93.2	92.6	87.0	91.4	93.2
TOTAL, 1ST 160 INSTS.	93.7	94.2	93.6	88.9	93.3	93.9
TOTAL, 1ST 170 INSTS.	94.7	95.2	94.3	90.2	94.1	94.5
TOTAL, 1ST 180 INSTS.	95.5	96.0	94.8	91.4	95.1	95.6
TOTAL, 1ST 190 INSTS.	96.2	96.6	95.3	92.5	95.9	96.4
TOTAL, 1ST 200 INSTS.	96.7	97.2	95.9	93.9	96.3	96.7
TOTAL, ALL OTHER INSTS.	3.3	2.8	4.1	6.1	3.7	3.3

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-26. — PERCENT DISTRIBUTION OF R&D EXPENDITURES BY UNIVERSITIES AND COLLEGES WITH LARGEST R&D PROGRAMS AND SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	7,744,954	1,100,902	890,026	618,126	278,238	4,209,679	137,170	346,512	165,301
				PERCENT DISTRIBUTION					
TOTAL, 1ST 10 INSTS.	21.6	29.3	27.7	27.7	33.5	16.8	27.9	20.2	17.5
TOTAL, 1ST 20 INSTS.	35.3	42.1	40.7	40.3	44.5	30.8	37.7	36.7	38.9
TOTAL, 1ST 30 INSTS.	45.7	55.7	51.4	46.9	51.3	41.3	45.2	44.4	47.6
TOTAL, 1ST 40 INSTS.	54.0	61.1	55.5	52.4	60.5	52.0	51.8	50.8	51.8
TOTAL, 1ST 50 INSTS.	60.6	63.9	61.1	57.3	64.3	60.5	60.9	54.1	58.3
TOTAL, 1ST 60 INSTS.	66.4	67.8	67.2	61.3	73.0	66.8	64.8	58.4	68.3
TOTAL, 1ST 70 INSTS.	71.6	75.4	71.5	73.9	80.3	70.6	66.5	63.2	71.1
TOTAL, 1ST 80 INSTS.	76.2	78.5	75.6	78.4	82.5	75.9	68.8	67.2	78.6
TOTAL, 1ST 90 INSTS.	79.8	80.0	77.4	81.5	83.7	81.0	71.0	68.5	80.4
TOTAL, 1ST 100 INSTS.	82.8	83.3	81.3	84.5	86.9	83.4	78.6	72.7	82.6
TOTAL, 1ST 110 INSTS.	85.4	86.3	82.6	86.0	89.0	86.3	80.6	74.9	88.6
TOTAL, 1ST 120 INSTS.	87.6	87.8	83.7	86.3	89.5	89.3	82.3	77.8	90.2
TOTAL, 1ST 130 INSTS.	89.5	89.3	85.7	87.9	90.2	91.3	83.8	80.5	92.0
TOTAL, 1ST 140 INSTS.	91.2	90.8	88.0	88.8	91.5	93.1	86.1	82.9	92.3
TOTAL, 1ST 150 INSTS.	92.6	91.2	90.1	90.3	92.2	94.6	88.0	85.0	92.9
TOTAL, 1ST 160 INSTS.	93.7	93.7	90.7	91.6	92.8	95.5	88.7	86.8	93.9
TOTAL, 1ST 170 INSTS.	94.7	94.1	91.4	93.2	93.2	96.5	90.0	88.2	94.7
TOTAL, 1ST 180 INSTS.	95.5	94.9	92.8	94.5	93.9	97.1	90.8	88.8	95.5
TOTAL, 1ST 190 INSTS.	96.2	96.1	94.2	95.1	95.4	97.4	91.3	90.5	96.0
TOTAL, 1ST 200 INSTS.	96.7	97.1	94.6	95.4	95.9	98.0	91.7	91.2	96.6
TOTAL, ALL OTHER INSTS.	3.3	2.9	5.4	4.6	4.1	2.0	8.3	8.8	3.4

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	7,744,954	7,260,636	6,818,343	6,040,118	4,959,603	4,749,264	4,559,049	4,093,586
1 JOHNS HOPKINS UNIVERSITY 1/	303,115E	289,940	270,490	253,204	282,386E	271,223	256,535	239,855
2 MASS INST OF TECHNOLOGY 2/	200,349	192,462	184,335	163,566	162,801	157,191	152,372	136,401
3 UNIV OF WIS-MADISON	168,282	157,520	147,535	138,196	100,026	101,019	96,240	89,331
4 STANFORD UNIVERSITY 2/	163,031	147,941	129,832	113,120	135,172	120,099	116,682	102,645
5 UNIVERSITY OF MINNESOTA	156,189	146,466	133,057	119,065	85,767	83,044	77,850	68,463
6 CORNELL UNIVERSITY 2/	153,323	145,769	123,275	107,611	90,185	90,538	81,533	70,583
7 UNIV OF CAL SAN DIEGO 3/	147,008	138,894	137,635	124,830	123,433	116,200	119,304	111,038
8 UNIVERSITY OF WASHINGTON	133,513	133,115	124,822	111,858	108,512	109,058	103,986	93,109
9 UNIVERSITY OF MICHIGAN	132,864	119,973	133,085	111,316	84,120	74,656	84,342	75,549
10 UNIV OF CAL BERKELEY 2/,3/	118,951	102,369	98,898	90,377	76,917	67,208	65,877	64,127
TOTAL, 1ST 10 INSTS.	1,676,635	1,574,449	1,[illegible],64	1,333,143	1,249,319	1,190,236	1,155,091	1,053,100
11 HARVARD UNIVERSITY	118,602E	114,941E	111,697E	100,901E	89,824	87,09[illegible]	84,594	76,377
12 COLUMBIA UNIV MAIN DIV	113,847	115,73[illegible]	100,746	101,407	100,574	101,974	85,407	83,729
13 UNIV OF PENNSYLVANIA	113,499	112,9[illegible]6	104,430	94,198	80,516	81,014	80,373	70,953
14 UNIV OF CAL LOS ANGELES 3/	113,266	103,[illegible]94	97,314	88,934	83,699	78,222	74,1[illegible]	70,365
15 UNIV OF TEXAS AT AUSTIN	110,570	92,069	82,401	78,621	58,231	52,606	49,477	48,644
16 TEXAS A & M UNIVERSITY	103,219	91,780	84,285	71,461	43,813	37,221	38,452	31,860
17 YALE UNIVERSITY	100,269	91,232	84,444	71,446	85,205	76,217	74,000	63,572
18 UNIV OF ILL URBANA	99,135	95,869	93,299	83,274	59,806	57,247	56,616	52,327
19 UNIV OF CAL DAVIS 3/	98,118	89,784	83,945	68,429	43,439	42,535	39,289	35,078
20 PENNSYLVANIA STATE UNIV	89,767	82,034	80,194	71,840	56,875	53,023	49,737	45,001
TOTAL, 1ST 20 INSTS.	2,736,927	2,564,022	2,405,919	2,163,654	1,951,301	1,857,346	1,787,214	1,630,628
21 UNIV OF CAL SAN FRANCISCO 2/	89,247	95,282	89,209	73,426	67,035	75,536	72,522	61,172
22 UNIVERSITY OF ARIZONA	88,192	88,247	80,726	69,095	44,741	44,113	42,412	35,959
23 UNIV OF SOUTHERN CAL	84,395	87,140	76,834	74,304	57,976	55,101	48,243	50,001
24 GEORGIA INSTITUTE OF TECH	82,924	71,402	65,078	54,653	49,533	38,632	36,090	32,827
25 MICHIGAN STATE UNIVERSITY	82,043	71,922	68,222	72,354	43,067	38,320	33,224	34,830
26 UNIVERSITY OF COLORADO	75,798	66,377E	66,109E	62,086	55,028	53,985E	52,727E	48,632
27 PURDUE UNIVERSITY	75,510	67,299	73,723	61,765	42,147	41,949	42,757	38,041
28 UNIVERSITY OF CHICAGO 2/	75,314	69,018	64,822	58,436	61,985	57,600	54,338	50,118
29 OHIO STATE UNIVERSITY	74,146E	82,614	78,492	70,652	41,438E	45,990	45,929	40,553
30 UNIVERSITY OF FLORIDA	73,467	68,370	60,073	54,656E	33,708	33,178	29,215	23,627E
TOTAL, 1ST 30 INSTS.	3,535,963	3,331,693	3,129,207	2,819,051	2,447,959	2,341,750	2,246,671	2,045,990
31 UNIVERSITY OF GEORGIA	70,665	65,161	60,523	55,595	22,434	21,703	20,729	17,953
32 WASHINGTON UNIVERSITY	69,357	68,049	62,383	59,379	54,350	55,608	51,712	47,756
33 NEW YORK UNIVERSITY	68,544	66,139	62,226	56,739	49,860	48,503	47,180	43,705
34 LOUISIANA STATE UNIV	68,383	66,814	60,293	53,058	18,044	18,220	19,165	15,868
35 UNIVERSITY OF ROCHESTER 2/	65,305	65,547	66,148	65,845	48,744	50,233	45,845	43,890
36 IOWA ST U OF SCI & TECH 2/	64,861	55,294	52,313	49,489	21,050	18,659	17,916	16,819
37 OREGON STATE UNIVERSITY	62,723	56,769	53,077	44,713	35,530	32,308	29,045	24,649
38 N C STATE UNIV AT RALEIGH	59,909	55,781	50,283	42,725	23,286	21,217	18,420	15,611
39 UNIVERSITY OF CONNECTICUT	58,902	55,109	50,054	44,248	34,960	33,225	31,160	27,510
40 DUKE UNIVERSITY	55,040	49,695E	46,407	39,064	46,808	47,238E	41,408	36,165
TOTAL, 1ST 40 INSTS.	4,179,652	3,936,011	3,692,914	3,329,878	2,803,025	2,688,668	2,569,351	2,335,936
41 BAYLOR COL OF MEDICINE	54,986	48,661	44,733	37,908	36,772	35,852	34,054	31,211
42 UNIVERSITY OF IOWA	54,771	55,406	50,601	45,032	40,460	38,271	36,279	33,603
43 YESHIVA UNIVERSITY	53,812	52,235	45,400	42,666	46,102	44,739	40,700	31,540
44 ROCKEFELLER UNIVERSITY	52,000	46,172	41,619	38,089	23,625	21,213	20,026	19,290
45 NORTHWESTERN UNIVERSITY	51,075	45,810	43,019	42,617	36,519	32,728	32,349	31,971
46 UNIV OF NC AT CHAPEL HILL	50,892	47,711	49,109	38,924	43,384	39,235	39,011	31,580
47 SUNY AT BUFFALO 4/	50,129	27,800	28,029	23,437	38,415	18,375	18,651	15,664
48 CALIFORNIA INST OF TECH 2/	49,824	44,048	47,255	43,299	43,340	39,382	41,915	38,330
49 RUTGERS THE ST UNIV OF NJ	49,729	42,938	40,279	36,335	18,894	18,643	18,943	16,[illegible]
50 UNIVERSITY OF MIAMI	48,283	51,899	55,512	41,450	32,236	34,090	39,005	29,268
TOTAL, 1ST 50 INSTS.	4,695,153	4,398,691	4,138,470	3,719,595	3,162,772	3,011,[illegible]24	2,890,180	2,614,552

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

— CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 UNIVERSITY OF PITTSBURGH	47,313	46,548	39,165	31,763	36,334	34,772	29,108	23,327
52 UNIVERSITY OF UTAH	46,830	43,765	42,632	37,475	37,981	35,019	35,319	31,588
53 UNIV OF HAWAII-MANOA	45,401	43,439	42,997	40,593	27,633	26,616	25,153	25,833
54 UNIV OF NEBRASKA-LINCOLN	44,797	44,172	38,824	27,607	12,750	13,890	11,303	10,380
55 U TEXAS SYSTEM CANCER CTR	44,90[illegible]	40,369	39,205	34,920	15,112	17,560	19,075	18,471
56 UNIV OF ILL CHICAGO 1/	44,497	30,147I	25,681	23,562	24,549	20,484I	18,329	16,051
57 INDIANA UNIVERSITY	44,331	42,598	34,125	30,307	29,882	28,663	25,644	22,278
58 UNIV OF MISSOURI COLUMBIA	44,231	40,978	40,703	34,620	16,143	15,604	15,934	13,603
59 CARNEGIE-MELLON UNIV	43,174	37,316	36,810	29,308	30,546	27,178	26,583	19,645
60 CASE WESTERN RESERVE UNIV	42,691	43,129	42,791	40,688	34,963	34,047	32,864	29,721
TOTAL, 1ST 60 INSTS.	5,142,727	4,811,112	4,521,403	4,055,238	3,428,665	3,265,049	3,129,492	2,825,449
61 OKLAHOMA STATE UNIVERSITY	42,903I	39,472	33,782	23,417	11,544I	10,991	7,672	11,107
62 WOODS HOLE OCNGRPHIC INST	42,070	33,135	33,902	29,209	35,997	29,002	28,740	25,042
63 NEW MEXICO STATE UNIV	41,579	34,690	32,999	25,618	30,750	26,066	25,122	21,718
64 COLORADO STATE UNIVERSITY	41,572	46,641	45,567	40,678	25,321	29,961	30,796	28,488
65 UNIVERSITY OF OKLAHOMA	40,987	29,785	32,006	23,019	14,206	13,523	14,206	12,161
66 UNIVERSITY OF KENTUCKY	40,829	38,907	35,795	30,013	13,786	15,010	13,965	13,093
67 VA POLYTECH INST & ST U	40,420	39,909	37,933	33,604	19,037	17,967	18,490	16,380
68 UNIV OF MD COLLEGE PARK	38,674E	34,251	45,230	39,917	31,094	27,521	26,394	23,174
69 UNIVERSITY OF VIRGINIA	37,620	33,661	30,924	27,297	28,564	26,892	26,119	23,606
70 UNIV OF ALASKA FAIRBANKS	37,325	38,218	36,652	42,154	13,859	19,055	18,995	26,587
TOTAL, 1ST 70 INSTS.	5,546,306	5,180,331	4,886,153	4,370,164	3,652,823	3,481,637	3,339,991	3,026,825
71 UNIV OF CAL RIVERSIDE 1/	37,236	35,539	34,416	24,961	11,602	11,217	11,133	8,862
72 PRINCETON UNIVERSITY	37,017	36,641	33,069	27,821	25,027	26,542	25,464	20,895
73 SUNY AT STONY BROOK	36,941	36,468	32,216	26,183	25,639	24,904	23,256	18,460
74 UTAH STATE UNIVERSITY	36,711	33,822	28,149	24,611	19,058	19,123	16,328	14,819
75 U TEX HLTH SCI CTR DALLAS	36,456	32,058	29,868	26,586	26,561	25,121	23,890	20,871
76 MISSISSIPPI STATE UNIV	35,714	36,582	33,684	29,035	7,775	9,560	9,833	8,824
77 KANS ST U - AG & APP SCI	35,130	34,806	32,049	27,793	10,268	10,928	9,884	8,677
78 WASHINGTON STATE UNIV	33,583	34,257	31,831	31,538	12,563	12,961	11,298	11,855
79 UNIVERSITY OF NEW MEXICO	33,356I	30,977	25,271	24,242	23,073I	21,968	18,862	19,024
80 UNIV OF CAL IRVINE 1/	33,293	31,456	29,917	23,303	27,484	26,234	24,570	20,211
TOTAL, 1ST 80 INSTS.	5,901,743	5,522,937	5,196,623	4,636,237	3,841,873	3,669,595	3,514,509	3,179,323
81 BOSTON UNIVERSITY	32,421	30,603	28,917	24,393	27,906	27,374	26,036	22,238
82 UNIV ALABAMA BIRMINGHAM	31,311	35,792	33,904	30,959	25,509	30,234	29,11[illegible]	25,171
83 UNIV OF MASS AT AMHERST	29,696	28,887	24,477	16,624	17,072	16,053	14,418	9,871
84 UNIVERSITY OF CINCINNATI	29,008	28,573	31,262	28,991	20,074	20,060	17,900	16,041
85 CUNY MT SINAI SCH OF MED	28,561	29,797	28,794	26,718	20,587	21,496	23,358	21,182
86 VANDERBILT UNIVERSITY	26,322	24,993	23,919	20,570	19,889	19,649	19,290	16,498
87 VIRGINIA COMMONWLTH UNIV	26,235	22,385	20,286	18,119	21,998E	18,852	16,894	14,675
88 AUBURN UNIVERSITY	26,176	23,256	22,711	20,248	8,083	7,473	7,476	6,969
89 UNIV OF RHODE ISLAND	24,766I	23,000E	21,968	16,932E	19,326I	18,400E	19,[illegible]28	13,847
90 U TEX HLTH SCI CTR S ANTO	24,743	19,341	17,251	13,972	16,005	13,319	11,887	10,158
TOTAL, 1ST 90 INSTS.	6,180,982	5,789,564	5,450,112	4,853,763	4,038,322	3,862,505	3,700,314	3,335,973
91 TEMPLE UNIVERSITY	24,632	21,503	18,283	18,613	18,567	15,541	14,102	13,686
92 EMORY UNIVERSITY	24,284	21,423	18,784	15,725	20,163	18,015	15,843	13,558
93 WAYNE STATE UNIVERSITY	23,990	21,542	22,569	20,818	12,713	12,903	13,192	12,196
94 RENSSELAER POLYTECH INST	23,084	20,302	18,816	14,824	12,054	11,766	11,062	9,192
95 UNIV OF CAL SANTA BARBARA 1/	22,884	13,102	12,220	13,967	17,863	10,633	10,596	11,078
96 BROWN UNIVERSITY	22,805	21,331	19,255	17,950	19,728	18,345	17,062	15,375
97 FLORIDA STATE UNIVERSITY	22,767	22,877	22,703	21,497	10,810	10,385	9,682	8,501
98 TULANE UNIVERSITY	22,440	19,271	18,984	12,426	11,221	10,678	10,332	7,990
99 ARIZONA STATE UNIVERSITY	22,294	11,511	9,707	6,938	10,288	7,840	8,267	5,939
100 UNIVERSITY OF KANSAS	22,111I	20,534	22,032	19,869	14,097I	13,422	19,196	16,676
TOTAL, 1ST 100 INSTS.	6,412,273	5,982,960	5,633,465	5,016,390	4,185,826	3,992,033	3,829,648	3,450,164

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
101 UNIV OF ARK FAYETTEVILLE	21,908	26,653	21,442	21,126	7,283	6,827	3,321	2,702
102 CLEMSON UNIVERSITY	21,766	23,552	19,559E	18,366	7,822	9,196	6,290	5,847
103 GEORGE WASHINGTON UNIV	20,638	23,334	17,248	18,961	17,792	20,140	14,610	16,781
104 UNIVERSITY OF DAYTON	19,920	18,612	20,357	19,678	16,984	17,226	19,027	17,988
105 GEORGETOWN UNIVERSITY	19,885	18,888	19,681	17,502	11,4[illegible]	[illegible]	11,185	9,958
106 UNIV OF MAINE ORONO	19,45[illegible]	18,599	17,342	14,339	8,3[illegible]	[illegible]	[illegible]548	5,825
107 U TEX HLTH SCI CTR HOUSTN	19,762	18,281	14,256	11,340	14,410	14,6[illegible]	[illegible]	8,811
108 UNIVERSITY OF DELAWARE	19,080	17,875	17,202	16,746	9,583	9,540	[illegible]	180
109 U TEX MED BRNCH GALVESTON	19,011	18,272	17,612	16,041	10,428	10,632	11,3[illegible]	[illegible]504
110 MONTANA STATE UNIVERSITY	18,896	15,333	15,465	13,737	6,309	6,916	7,745	
TOTAL, 1ST 110 INSTS.	6,612,203	6,182,359	5,813,629	5,184,226	4,296,380	4,105,283	3,931,351	3,543,946
111 UNIV OF MED & DENT OF N J	18,831	16,123	14,589	12,394	11,456	11,115	10,207	9,095
112 UNIV OF VT & ST AGRIC COL	18,805	18,575	18,428	15,685	12,850	12,889	13,404	11,640
113 UNIVERSITY OF DENVER	18,302I	17,333	17,514	14,743	13,143I	12,505	12,416	10,786
114 SYRACUSE UNIVERSITY	17,565	19,442	17,938	16,517	9,904	9,823	9,507	8,626
115 UNIVERSITY OF IDAHO	17,453	17,272	20,127	13,721	11,496	12,127	8,849	6,402
116 NORTH DAKOTA STATE UNIV	17,269	18,101	15,086	12,984	3,[illegible]24	4,428	3,622E	2,893
117 DARTMOUTH COLLEGE	16,347	14,525	15,778	9,578	12,730	12,010	12,028	8,451
118 SUNY UPSTATE MEDICAL CTR	15,756	14,476	6,345E	6,345E	5,270	5,232	4,029E	4,029E
119 UNIV OF P R-MAYAGUEZ	15,733I	14,611I	13,749I	12,162	5,907I	5,624I	5,406I	4,889
120 THOMAS JEFFERSON UNIV	15,580	9,345	10,265	9,532E	6,068	6,982	7,680	7,739E
TOTAL, 1ST 120 INSTS.	6,783,844	6,342,162	5,963,448	5,307,887	4,389,128	4,198,018	4,018,499	3,618,496
121 OREGON HLTH SCIENCES UNIV	15,561	16,954	11,497	12,854	10,013	9,219	7,933E	8,836
122 BRANDEIS UNIVERSITY	15,431	13,654	11,617	9,566	12,932	10,487	10,441	8,534
123 UNIVERSITY OF WYOMING	15,119	14,622	13,469	11,049	6,591	7,319	6,849	6,233
124 UNIV OF SOUTH CAROLINA	14,631	13,249	7,460I	6,599E	8,260	7,561	5,356I	4,844E
125 TEXAS TECH UNIVERSITY	14,597	13,261	13,784	13,032	5,662	5,345	6,275	6,363
126 UNIV OF MD BALT PROF SCH	14,594I	13,553I	12,753	15,088	12,839I	12,224I	11,750	13,322
127 LEHIGH UNIVERSITY	14,463	13,679	10,608	9,413	6,383	6,447	5,830	5,131
128 INST OF AGRI UNIV OF TENN	14,144	14,545	14,437	15,711I	4,396	5,155	6,295	6,878I
129 UNIV OF NEVADA - RENO	13,969	11,441	5,389	7,811	6,000E	5,187	3,747	3,486
130 UNIV OF NEW HAMPSHIRE	13,954	13,162	11,673	10,112	7,546	7,558	7,208	6,189
TOTAL, 1ST 130 INSTS.	6,930,307	6,480,282	6,076,135	5,419,122	4,469,750	4,274,520	4,090,183	3,688,532
131 TUFTS UNIVERSITY	13,914I	13,177I	12,254E	11,783	11,495I	10,937I	10,461E	10,099
132 U TENNESSEE KNOXVILLE	13,807I	12,822	16,489	12,742E	10,828I	10,309	12,549	9,169E
133 WEST VIRGINIA UNIVERSITY	13,704	21,080	19,553	17,510	7,196	10,476	10,717	9,225
134 MEDICAL COLLEGE OF WIS	13,453I	12,741I	11,849I	10,655	8,136I	7,741I	7,404I	6,664
135 U OF HOUSTON UNIV PARK	13,102	13,932	14,430	12,628	7,002	6,659	7,284	6,154
136 SUNY DOWNSTATE MED CTR	13,072	12,510	13,533	10,799	9,100	8,467	9,219	7,358
137 UNIV OF CAL SANTA CRUZ 3/	12,867	11,094	10,081	7,844	8,303	7,240	6,957	5,823
138 UNIVERSITY OF NOTRE DAME	12,793	12,472	12,628	8,845	11,177	11,083	11,441	7,816
139 RUSH UNIVERSITY	12,122	10,844	10,315	8,815	7,137	7,108	6,268	6,195
140 ST JOHN'S UNIVERSITY (NY)	12,000E	11,790	10,587	8,519	200E	170	175	636
TOTAL, 1ST 140 INSTS.	7,061,141	6,612,724	6,207,854	5,529,262	4,550,324	4,354,710	4,172,658	3,757,731
141 UNIVERSITY OF OREGON MAIN	11,985	10,504	9,812	9,104	9,031	8,263	8,300	7,893
142 ALBANY MEDICAL COLLEGE	11,823I	11,197	12,166	11,420	7,621I	7,251	5,678	5,351
143 TENNESSEE STATE UNIV	11,798I	11,372	10,329	670E	6,807I	6,830	6,198	0
144 HOWARD UNIVERSITY	10,959	11,244	9,515	11,658	8,671	9,178	7,332	8,172
145 UNIVERSITY OF MISSISSIPPI	10,687E	9,912E	10,065	7,976	6,262E	5,514E	5,963	4,221
146 U MASS MED SCHL WORCESTER	10,645I	9,886	7,616	3,676	7,070I	6,731	5,200	2,404
147 SOUTHERN ILL U-CARBONDALE	10,474	9,387	8,786	6,589	4,163	3,943	4,178	3,044
148 SUNY AT ALBANY	10,442	8,800	5,137	6,711E	7,418	6,700	7,084	5,206
149 RICE UNIVERSITY	10,412I	9,861E	9,391	8,029	7,946I	7,560E	7,200	6,184
150 MED UNIV OF SO CAROLINA	10,347	9,655	8,930	8,615	7,629	7,420	6,950	6,774
TOTAL, 1ST 150 INSTS.	7,170,713	6,714,542	6,303,603	5,603,710	4,622,942	4,424,100	4,236,741	3,806,980

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
151 MICHIGAN TECH UNIVERSITY	10,012	8,772	8,511	8,483	3,568	3,431	3,465	3,193
152 UNIV TENN CTR HEALTH SCI	9,959	8,749	9,369	9,529	7,188	6,995	7,831	8,182
153 US NAVAL POSTGRAD SCHOOL	9,761	7,954	6,650	6,314	7,700	7,853	6,596	6,246
154 U OF CAL SYS WIDE PRGMS 3/	9,402	7,388	7,583	5,568	364	566	568	656
155 UNIVERSITY OF LOUISVILLE	8,669	7,294	6,520	6,489	4,294	3,949	4,029	4,184
156 N MEX INST MINING & TECH	8,344I	7,749	8,108	7,312	5,056I	4,814	5,226	5,011
157 NEW YORK MEDICAL COLLEGE	8,260	6,026	6,212	5,233E	6,674	4,995	5,218	4,263E
158 UNIV OF MISSOURI ROLLA	8,214	7,471	7,613	6,421	3,468	3,241	3,801	3,064
159 UNIVERSITY OF N DAKOTA	8,000	8,332	5,629I	4,979E	5,500	5,476	4,418I	3,996E
160 UNIV OF CENTRAL FLORIDA	7,980	5,441	5,468	5,582	2,974	1,748	2,666	2,853
TOTAL, 1ST 160 INSTS.	7,299,314	6,789,720	6,375,264	5,669,620	4,671,728	4,467,188	4,2[illegible]559	3,848,728
161 UNIV OF WIS-MILWAUKEE	7,851	7,586	7,538	7,029	3,383	3,192	3,458	3,705
162 SOUTH DAKOTA STATE UNIV	7,764	8,722	7,941	8,129	2,462	2,243	2,739	3,370
163 DESERT RESEARCH INSTITUTE	7,535	5,798	6,165	5,443	3,389	2,821	2,856	2,604
164 NORTHEASTERN UNIVERSITY	7,274I	6,889	6,124	5,669I	5,629I	5,356	4,398	4,742I
165 SAN DIEGO STATE UNIV	7,202	6,041	4,619	4,417	5,480	4,494	3,893	3,556
166 ST LOUIS UNIVERSITY	7,166	6,479I	6,025E	6,695E	5,515	4,835I	4,625E	5,139E
167 WAKE FOREST UNIVERSITY	7,119I	6,742I	6,270E	5,972E	5,640I	5,366I	5,[illegible]32E	4,888E
168 HAHNEMANN UNIVERSITY	7,031I	6,659	5,361	4,451	5,929I	5,641	4,[illegible]9	3,520
169 UNIF SERV UNIV OF HLTH SC	6,997	4,645	3,688	2,853	6,997	4,645	3,68[illegible]	2,853
170 MEDICAL COL OF GEORGIA	6,822	7,140	6,419	5,476	5,756	6,304	5,956	5,123
TOTAL, 1ST 170 INSTS.	7,332,075	6,856,421	6,435,414	5,725,754	4,721,988	4,512,085	4,321,897	3,888,228
171 SUNY COL OF ENV SCI & FOR	6,773I	6,290I	5,919	5,699	1,896I	1,805I	1,735	1,686
172 U OF NEB MED CTR AT OMAHA	6,728	6,483	6,959	7,419	3,489	3,810	4,753	5,213
173 UNIV OF TEXAS AT DALLAS	6,643	6,221	5,823	6,288	4,128	4,338	4,017	4,223
174 UNIV OF SOUTH FLORIDA	6,502	6,600	6,302	4,771	3,543	3,965	3,552	2,799
175 SUNY AT BINGHAMTON	6,441	5,636	5,232	4,504	3,438	4,001	3,933	3,264
176 MED COL OF OHIO AT TOLEDO	6,136I	5,698I	5,362E	5,362	4,288I	4,083I	3,925E	3,925
177 WRIGHT STATE UNIVERSITY	6,086	6,525	6,976	4,923	3,035	4,025	3,867	3,365
178 DREXEL UNIVERSITY	5,896	5,192	5,726	5,367	4,291	3,636	4,032	3,960
179 SAN JOSE STATE UNIVERSITY	5,795I	5,586	2,380	1,762I	3,951I	3,964	1,[illegible]78	1,289I
180 CUNY CITY COLLEGE	5,722	4,665	4,814	3,565	5,494	4,414	4,[illegible]64	3,299
TOTAL, 1ST 180 INSTS.	7,394,797	6,915,313	6,490,507	5,775,414	4,759,541	4,550,126	4,357,[illegible]55	3,921,211
181 NORTH TEXAS STATE UNIV	5,674	5,810	4,236	3,456E	3,249	3,669	2,[illegible]89	1,970E
182 U OF ARKANSAS MED SCI CAM	5,407	5,696	4,911	5,511	3,950	3,932	3,[illegible]01	4,275
183 COLORADO SCHOOL OF MINES	5,374	5,897	5,676	4,510	3,675	4,907	4,424	3,741
184 POLYTECHNIC INST OF N Y	5,276	5,184	5,319	6,814E	4,113	3,979	4,739	4,584E
185 BRIGHAM YOUNG UNIVERSITY	5,260	4,375	4,451I	4,00[illegible]E	2,479	1,892	1,690I	1,521E
186 UNIV OF WEST FLORIDA	5,231	5,552	6,650	4,333	1,8[illegible]1	1,651	3,378	1,967
187 INSTITUTE PAPER CHEMISTRY	5,209	5,856	5,646	3,664E	565	1,219	1,228	48E
188 WESLEYAN UNIVERSITY	5,179E	5,179I	4,816	1,956E	3,760E	3,760I	3,596	1,296E
189 BOSTON COLLEGE	5,127	6,151	5,824	5,430	4,871	5,989	5,182	4,818
190 OHIO UNIVERSITY	4,848	5,400	4,164	3,187	2,012	2,140	2,134	1,[illegible]00
TOTAL, 1ST 190 INSTS.	7,447,382	6,970,413	6,542,200	5,818,277	4,790,016	4,583,264	4,390,616	3,947,031
191 LOYOLA UNIV - CHICAGO	4,775	4,455	4,098	3,532I	2,793	2,652	2,946	2,834I
192 ILLINOIS INST OF TECH	4,762	5,202	4,476	3,010I	3,891	4,347	3,906	1,962I
193 NC AG & TECH STATE UNIV	4,745	2,787	3,656	4,969	4,488	2,641	3,62[illegible]	4,888E
194 STEVENS INSTITUTE OF TECH	4,686	4,691	4,014	4,130	2,905	2,911	2,27[illegible]	2,460
195 THE MEDICAL COL OF PENNA	4,377	5,867	3,966	2,651	3,371	3,470	3,31[illegible]	2,381
196 UNIV OF P R-MED SCI CMPUS	4,323I	4,015I	3,778I	3,342I	4,037I	3,844I	3,6[illegible]I	3,342I
197 NORTHERN ILLINOIS UNIV	4,271	4,039	5,375	3,898	1,643	1,241	1,443	1,233
198 PRAIRIE VIEW A & M UNIV	4,232I	4,079	1,561I	1,381E	3,768I	3,780	1,492I	1,349E
199 FLORIDA A & M UNIVERSITY	4,227I	4,074	2,520	2,739I	1,241I	1,245	2,126	2,548I
200 WORCESTER POLY INSTITUTE	4,143	4,006	3,587	3,696	1,494	1,612	2,070	2,035
TOTAL, 1ST 200 INSTS.	7,491,923	7,013,628	6,579,231	5,851,625	4,819,647	4,[illegible]	4,[illegible]	3,972,[illegible]

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
201 UNIV OF SOUTH ALABAMA	4,094I	3,802	3,498	2,417E	3,103I	2,954	2,602	1,793
202 UNIVERSITY OF MONTANA	4,056	3,588	2,956	2,898	1,848	1,591	1,525	1,539
203 CLARKSON COLLEGE OF TECH	4,015	3,228	3,641	3,624	2,769	2,42[illegible]	2,868	2,639
204 UNIV OF ARK PINE BLUFF	3,744I	3,199	3,783	3,564	1,763I	1,502	2,290	2,106
205 UNIV ALABAMA HUNTSVILLE	3,662	2,963	3,133	2,995	2,497	2,036	2,601	2,385
206 UNIV OF MISSOURI SYS OFF	3,661	3,400	3,649	3,541	431	500	483	459
207 CUNY HUNTER COLLEGE	3,631	2,930	2,889	405E	2,723	2,150	2,133	379E
208 UNIVERSITY OF LOWELL	3,543	2,726I	2,565	2,280	2,075	1,802I	1,732	1,561
209 UNIV OF MASS BOSTON	3,366	2,330I	2,151	922E	2,265	1,285I	1,291	654E
210 OREGON GRADUATE CENTER	3,218I	3,048I	2,835	3,210	2,014I	1,916I	1,833	1,870
TOTAL, 1ST 210 INSTS.	7,528,913	7,044,842	6,610,331	5,877,481	4,841,135	4,629,171	4,436,891	3,947,458
211 OLD DOMINION UNIVERSITY	3,182I	2,995I	2,781I	2,460E	0I	0I	0I	0
212 U OF MD CENTER FOR EES	3,070	3,182	3,009	3,027	850	1,003	860	472
213 U HLTH SCI/CHCGO MED SCH	3,006I	2,847	2,731	1,094I	1,294I	1,231	1,217	767I
214 UNIV OF P R-RIO PIEDRAS	2,967I	2,795I	2,592I	2,293I	1,265I	1,204I	1,157I	1,046I
215 CATHOLIC UNIV OF AMERICA	2,899	3,360	3,247	3,017	2,899	2,448	2,744	2,677
216 SOUTHERN METHODIST UNIV	2,822	3,266	2,194E	2,743	1,454	2,223	1,571E	1,964
217 NEW YORK INST TECHNOLOGY	2,737	2,474I	2,301E	2,301	228	109I	104E	104
218 CATHOLIC UNIV OF P R	2,731	2,066	1,762	423I	551	335	264	296I
219 UNIVERSITY OF GUAM	2,633	1,862	2,060	2,114	1,231	949	855	1,100
220 LOMA LINDA UNIVERSITY	2,623I	2,484E	2,385	4,091E	1,961I	1,866E	1,814E	3,111E
TOTAL, 1ST 220 INSTS.	7,[illegible]7,583	7,072,093	6,635,373	5,901,044	4,852,868	4,640,539	4,447,477	3,998,995
221 COLLEGE OF WILLIAM & MARY	2,621	1,893	2,025	975E	2,095	1,390	1,314	923E
222 CLARK UNIVERSITY	2,575I	2,439	1,754	1,348	2,008I	1,911	1,218	1,048
223 OAKLAND UNIVERSITY	2,573	2,644	3,233	2,358	1,889	1,746	1,732	1,564
224 TEXAS COL OF OSTEO MED	2,410	3,410	737	720	1,620	1,850	217	300
225 SOUTHERN U & A&M COLLEGE	2,401	2,387	1,929	1,875	2,401	2,361	1,929	1,875
226 CLEVELAND STATE UNIV	2,361	2,101	2,039	1,407	1,261	953	719	351
227 KENT STATE UNIVERSITY	2,347	2,322	3,009	1,050E	1,495	1,452	1,660	844E
228 CREIGHTON UNIVERSITY	2,316	2,044	1,663	2,348I	892	971	984	1,566I
229 THE UNIVERSITY OF ALABAMA	2,246I	2,086E	1,[illegible]7E	1,911E	954I	908E	865E	832E
230 GALLAUDET COLLEGE	2,235	2,013	2,852	2,589E	2,115	1,893	1,574E	0
TOTAL, 1ST 230 INSTS.	7,581,668	7,095,432	6,654,601	5,917,625	4,869,598	4,695,974	4,459,689	4,008,318
231 ATLANTA UNIVERSITY	2,195	1,490	1,820	1,797	1,995E	1,174E	1,474	1,548
232 MEHARRY MEDICAL COLLEGE	2,157	2,247	1,937E	1,682E	1,803	1,922	1,592E	1,215E
233 CALIF ST COL STANISLAUS	2,155	1,948	1,734	1,773	0	0	0	89
234 LOUISIANA TECH UNIVERSITY	2,115	1,951	1,429E	1,245	499	438	669E	685
235 U OF MD BALTIMORE COUNTY	2,109	2,057	2,255	1,606	1,657	1,642	1,907	1,328
236 VIRGINIA STATE UNIVERSITY	2,109I	2,033I	1,877	1,913	1,862I	1,868I	1,877	1,904
237 S DAK SCH MINES & TECH	2,075I	1,927I	1,813I	1,604E	1,041I	991I	953I	862E
238 PORTLAND STATE UNIVERSITY	2,070I	1,922	1,725E	1,570E	1,275I	1,214	1,300E	1,180E
239 ALABAMA A & M UNIVERSITY	2,057	1,861	1,601	1,313	2,057	1,861	1,601	1,308
240 US NAVAL ACADEMY	2,037	1,619	1,433	1,217I	2,037	1,998	1,433	1,217I
TOTAL, 1ST 240 INSTS.	7,602,747	7,114,047	6,672,225	5,933,345	4,883,824	4,668,682	4,472,495	4,019,654
241 UNIVERSITY OF NEW ORLEANS	2,025	2,842	2,780	3,447	742	1,122	1,232	1,660
242 EAST CAROLINA UNIVERSITY	2,009	1,970	1,570	1,086	863	822	768	514
243 NEW MEXICO HIGHLANDS UNIV	1,956	368I	340I	301	417	303I	304I	275
244 GEORGIA STATE UNIVERSITY	1,906	1,910	1,905	1,046	818	649	548	475
245 N J INST OF TECHNOLOGY	1,843	1,988	2,027	2,589	692	753	934	1,004
246 CUNY BROOKLYN COLLEGE	1,814I	1,748I	1,614I	1,428I	1,052I	1,055I	1,060I	999
247 UNIV OF TEX AT ARLINGTON	1,814	1,619	1,562	1,354	577	533	547	540
248 UNIVERSITY OF AKRON	1,808	2,25[illegible]	1,491	1,251	754	1,038	614	696
249 EASTERN WASHINGTON UNIV	1,802I	1,[illegible]	1,136	375	797I	800	557	241
250 TEXAS CHRISTIAN UNIV	1,773	75[illegible]	3,773	2,086	642	346	3,162	1,479
TOTAL, 1ST 250 INSTS.	7,621,907	7,131,231	6,690,023	5,948,308	4,891,178	4,676,103	4,482,221	4,027,579

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
251 BOWLING GREEN STATE UNIV	1,717	1,557	1,453E	1,453E	1,000	994	910E	910E
252 SUNY COLLEGE BUFFALO	1,698I	1,637I	1,511I	1,337I	1,436I	1,439I	1,446I	1,308I
253 WELLESLEY COLLEGE	1,643	1,905	2,294	1,472	844	957	1,239	622
254 CUNY QUEENS COLLEGE	1,626	1,934	1,681	1,471	865	1,220	1,174	874
255 SAN FRANCISCO STATE UNIV	1,582	1,183	1,434	1,100	1,381	1,007	1,315	972
256 TEXAS A & I UNIVERSITY	1,572	2,050	1,523	1,186	334	276	295	240
257 FLORIDA INST OF TECH	1,520	1,332	1,369	1,269	604	702	887	701
258 CUNY GRAD SCH & UNIV CTR	1,520	1,201	1,304	1,379	1,388	1,008	1,132	1,212
259 FAIRLEIGH DICKINSON UNIV	1,514	1,696	1,441	1,356	768	755	943	878
260 UNIV OF MISSOURI KAN CITY	1,497	1,475	1,358	1,076	352	367	386	332
TOTAL, 1ST 260 INSTS.	7,637,396	7,147,201	6,705,391	5,961,407	4,900,148	4,684,828	4,491,888	4,035,628
261 SOUTH CAROLINA ST COLLEGE	1,478I	1,253	521I	508E	1,473I	1,255	51[illegible]I	508E
262 UNIV OF NEVADA LAS VEGAS	1,448	1,201	363	679	1,263	967	17[illegible]	564E
263 ILLINOIS STATE UNIVERSITY	1,446I	1,343	1,648	1,005	608I	579	832	425
264 UNIVERSITY OF TULSA	1,434	1,513	1,881	1,540	702	743	598	703
265 UNIV OF TEXAS AT EL PASO	1,407	1,372	1,372	1,436	720	765	766	898
266 MARQUETTE UNIVERSITY	1,379	1,121	1,492	1,103	1,006	894	1,090	798
267 U OF MD EASTERN SHORE	1,376E	1,376I	1,376	1,024I	1,032E	982I	982	1,024I
268 MEMPHIS STATE UNIVERSITY	1,370	1,441	1,634	1,159	509	402	556	279
269 WENTWORTH INST OF TECH	1,327	1,271	1,761	2,108	1,327	1,268	1,728	2,088
270 TENN TECHNOLOGICAL UNIV	1,321E	1,381	1,536	844	482	588	599	356
TOTAL, 1ST 270 INSTS.	7,651,382	7,160,483	6,718,975	5,972,813	4,909,270	4,693,271	4,499,734	4,043,271
271 OCCIDENTAL COLLEGE	1,278	965	1,527	922	282	107	184	218
272 CALIF ST UNIV LOS ANGELES	1,277	1,120	1,290	1,268E	1,048	944	1,037	1,107
273 JACKSON STATE UNIVERSITY	1,266I	1,220I	1,126I	996	897I	900I	904I	818
274 SMITH COLLEGE	1,265	959	909	493	231	275	470	188
275 MIAMI UNIVERSITY (OHIO)	1,243	1,186	1,062E	1,062E	651	738	676E	676E
276 THE WRIGHT INSTITUTE	1,236I	1,171	1,663	1,461	837I	796	1,566	1,392
277 FORDHAM UNIVERSITY	1,211	1,302	815	697	1,043	1,112	685	574
278 NE OHIO UNIVS MED SCHOOL	1,204	904	872	748	568	502	543	566
279 NORTHERN ARIZONA UNIV	1,174	1,317	1,167	1,130	423	442	410	378
280 MURRAY STATE UNIVERSITY	1,164	247I	228	1,166I	314E	41I	42	44I
TOTAL, 1ST 280 INSTS.	7,663,700	7,170,874	6,729,544	5,982,756	4,915,464	4,699,128	4,506,250	4,049,232
281 WICHITA STATE UNIVERSITY	1,162	1,071	1,255	1,736	547	309	385	341
282 MONT COL MINRL SCI & TECH	1,149	1,351	2,084	1,674	814	1,132	1,957	1,614
283 MANHATTAN COLLEGE	1,122	898	1,138	941	972	792	993	851
284 UNIV OF STHRN MISSISSIPPI	1,133	1,573	1,193	1,440	569	1,029	830	1,022
285 KENTUCKY STATE UNIVERSITY	1,101I	941I	941	398I	1,101I	941I	941	398I
286 ALFRED UNIVERSITY	1,088	1,141I	1,061I	954E	184	84I	80I	72E
287 CALIF ST UNIV LONG BEACH	1,082	849	1,041	914	736	625	706	595
288 MCNEESE STATE UNIVERSITY	1,072	2,710	1,817	1	940	2,694	1,808	0
289 UNIV OF WIS-SUPERIOR	1,066	1,139	793	550	954	1,056	685	420
290 UNIVERSITY OF TOLEDO	1,047	1,005	992	1,159	627	602	602	463
TOTAL, 1ST 290 INSTS.	7,674,733	7,183,552	6,741,859	5,992,523	4,922,908	4,708,392	4,515,237	4,055,008
291 TEXAS WOMAN'S UNIVERSITY	1,041	919	1,095	954	212	11[illegible]	330	223
292 INSTITUTE OF TEXTILE TECH	1,039I	984I	915I	823I	0I	0I	0I	0I
293 AMERICAN UNIVERSITY	1,028	2,812	2,957	2,456	760	1,799	2,509	2,374
294 UNIV OF MISSOURI ST LOUIS	1,013	1,033	923	717	403	292	483	396
295 CHICAGO COL OF OSTEO MED	1,010	797	743	468I	196	95	55	51I
296 CENTRAL WASHINGTON UNIV	1,009	246	171	1,013	90	219	115	74
297 ALCORN STATE UNIVERSITY	1,006I	860I	860I	839I	1,004I	855I	855I	839I
298 TUSKEGEE INSTITUTE	998E	973E	927	631	998E	973E	927	615
299 CLAREMONT GRADUATE SCHOOL	984I	932	129	141E	414I	394	129	77E
300 CALIF ST UNIV FULLERTON	968	1,243	1,210	192	329	466	578	192
TOTAL, 1ST 300 INSTS.	7,684,829	7,194,351	6,751,789	6,000,757	4,927,314	4,713,597	4,521,218	4,059,849

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

– CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
301 UNIVERSITY OF SANTA CLARA	961	1,533	1,232I	1,100I	855	1,377	1,209I	1,088I
302 POMONA COLLEGE	959I	972I	972	969E	912I	897I	897	886E
303 HARVEY MUDD COLLEGE	950	1,286	1,224	748	225	573	546	418
304 UNIVERSITY OF THE PACIFIC	914I	866E	866I	779I	693I	659E	659I	593I
305 UNIVERSITY OF D C	910	1,058	428	393	505	882	428	393
306 UNIV OF SOUTH DAKOTA	901	998	217	875	689	618	217	537
307 FLORIDA ATLANTIC UNIV	893	851	765	687	473	277	394	332
308 SOUTHWEST MISSOURI ST U	855	841	716	502	110	70	89	14
309 COL OF THE VIRGIN ISLANDS	832I	711I	711I	693I	714I	608I	608I	596I
310 UNIV OF SOUTHWESTERN LA	821	1,559	1,195	1,702	466	738	643	710
TOTAL, 1ST 310 INSTS.	7,693,825	7,205,036	6,760,115	6,009,213	4,922,956	4,720,296	4,526,908	4,065,416
311 AMHERST COLLEGE	816	721	745	853	723	681	670	789
312 WESTERN ILLINOIS UNIV	811	775	759	682	160	141	122	178
313 EAST TENNESSEE STATE UNIV	809	1,000E	943	739	434	630E	594	401
314 EASTERN VA MEDICAL SCHOOL	804	727	806	0	544	579	660	0
315 SETON HALL UNIVERSITY	791I	749I	697I	427I	710I	676I	647I	582I
316 UNIVERSITY OF DETROIT	786	560I	571	451	270	64I	61	138
317 XAVIER UNIVERSITY	757I	738I	738	509	299I	303I	303	177
318 CAL POLY ST U SAN LUIS OB	752I	725	594	575E	270I	271	325	575E
319 NOVA UNIVERSITY	741	827	739	1,044I	646	624	586	649I
320 BRYN MAWR COLLEGE	728I	689	360I	324E	560I	533	360I	324E
TOTAL, 1ST 320 INSTS.	7,701,620	7,212,537	6,767,017	6,015,017	4,937,572	4,724,798	4,531,236	4,069,249
321 TRINITY UNIVERSITY	723I	704	1,082	687	594I	603	642	526
322 EMMANUEL COLLEGE	722I	73 I	731E	731	722I	728I	728E	728
323 CUNY BERNARD BARUCH COL	715I	689I	636I	563I	154I	155I	156I	141I
324 NORFOLK STATE UNIVERSITY	696I	595I	595I	580	694I	591I	991I	580
325 BAYLOR UNIVERSITY	690	510	524I	471	74	32	64I	58
326 U TENNESSEE CHATTANOOGA	683I	658E	645E	330E	107I	107E	105E	69E
327 STEPHEN F AUSTIN ST UNIV	671	749	660	690	163	269	251	252
328 US AIR FORCE ACADEMY	665	442E	433	851	665	442E	433	851
329 BARNARD COLLEGE	658	290I	290I	265E	370	181I	181I	190E
330 DENISON UNIVERSITY	653I	662I	662I	605E	267I	263I	263I	276E
TOTAL, 1ST 330 INSTS.	7,708,496	7,218,567	6,773,275	6,020,790	4,941,382	4,728,169	4,534,690	4,073,016
331 DUQUESNE UNIVERSITY	631I	998I	556I	500E	0I	0I	0I	0
332 WESTERN WASHINGTON UNIV	621	721	965	915	260	284	574	743
333 MARSHALL UNIVERSITY	611	479	325	96	590	452	300	82
334 WILLIAMS COLLEGE	600E	682I	682	373E	338E	606I	606	345E
335 CUNY YORK COLLEGE	583	532E	471	359E	541	480	427	319E
336 MOUNT HOLYOKE COLLEGE	582	415	513	353	366	248	338	204
337 MILWAUKEE SCHOOL OF ENG	541I	527I	527I	474	0I	0I	0I	0
338 BALL STATE UNIVERSITY	531	526	583	255	207	91	202	67
339 BOWDOIN COLLEGE	530	622	532	563	143	182	196	195
340 CALIF STATE UNIV CHICO	528	233	475	310	99	47	126	85
TOTAL, 1ST 340 INSTS.	7,714,254	7,223,902	6,778,904	6,024,988	4,943,886	4,730,599	4,537,419	4,075,096
341 UNIV OF SAN FRANCISCO	514	595	586	445	325	371	448	372
342 INDIANA STATE UNIVERSITY	506	474	556	254	292	192	297	233
343 TEXAS SOUTHERN UNIV	497	643	356	362I	396	529	321	303I
344 UNIV OF WIS-GREEN BAY	494	526	408	383	396	420	276	260
345 VILLANOVA UNIVERSITY	493I	467E	441	482	444I	422E	398	420
346 CALIF STATE UNIV FRESNO	491I	473I	437	362E	45I	45I	45	36E
347 UNIV OF WIS-PARKSIDE	479	406	384	232	337	292	309	155
348 UNIV OF N C AT CHARLOTTE	473I	456I	421I	372E	107I	107I	108I	98E
349 PAN AMERICAN UNIVERSITY	461	401	507	502	461	379	487	477
350 WEST TEXAS STATE UNIV	460I	443	455	525	93I	93	88	62
TOTAL, 1ST 350 INSTS.	7,719,122	7,228,786	6,783,485	6,028,897	4,946,782	4,733,409	4,540,196	4,077,472

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
351 UNIV OF N C AT GREENSBORO	460I	427I	402I	356	244I	232I	223I	202
352 HUMBOLDT STATE UNIVERSITY	460	620	733	0	310	499	464	0
353 SOUTHWEST TEXAS ST UNIV	457	515	485	414	50	155	190	220
354 VASSAR COLLEGE	453	418I	418	326	398	365I	365	276
355 COOPER UNION	451	311I	311I	280	120	102I	102I	92
356 SWARTHMORE COLLEGE	448I	437I	437I	393E	339I	344I	344I	310E
357 REGIS COLLEGE	447	386	399	369	447	386	399	369
358 US MILITARY ACADEMY	441I	377I	377I	368I	58I	49I	49I	48I
359 UNIV OF WIS-STEVENS POINT	436	398	377	307	320	264	216	170
360 BUCKNELL UNIVERSITY	429	503	493	486	83	253	316	341
TOTAL, 1ST 360 INSTS.	7,723,604	7,233,178	6,787,887	6,032,196	4,949,151	4,736,018	4,542,864	4,079,900
361 UNIV OF WIS-LA CROSSE	426	375	640	589	188	144	323	277
362 ARKANSAS STATE UNIVERSITY	407I	392	158	0	121I	121	14	0
363 WESTERN KENTUCKY UNIV	397	680	418	309	239	215	86	193
364 WESTERN MICHIGAN UNIV	386E	621I	584I	517E	94E	295I	245I	222E
365 CHICAGO STATE UNIVERSITY	378	739I	682	184I	377	679I	682	179I
366 CUNY COL STATEN ISLAND	374I	360I	332	230E	135I	135I	136	87E
367 SOUTHEASTERN MASS UNIV	372I	399I	331I	293I	277I	278I	279I	252I
368 LAMAR UNIVERSITY	370	278	203	568	0	59	65	208
369 GEORGE MASON UNIVERSITY	360I	334I	314I	278E	180I	171I	164I	148E
370 S ILLINOIS U EDWARDSVILLE	345	405	664	829	136	184	299	302
TOTAL, 1ST 370 INSTS.	7,727,419	7,237,721	6,792,213	6,035,993	4,950,898	4,738,259	4,545,157	4,081,368
371 GEORGIA SOUTHERN COLLEGE	341	258	142	90	322	139	75	32
372 SUNY COLLEGE POTSDAM	337I	325I	300	32E	73I	73I	73	9E
373 MIDDLEBURY COLLEGE	337I	328I	328I	295	0I	0I	0I	0
374 MASS COL PHAR/ALLIED HLTH	325	89I	83I	75E	25	0I	0I	0
375 REED COLLEGE	315	469	763	608	269	404	705	570
376 ITHACA COLLEGE	308	148I	148I	133E	83	102I	102I	92E
377 HAVERFORD COLLEGE	302I	306	479I	438	277I	272	369I	388
378 IDAHO STATE UNIVERSITY	298	593	1,480	713	230	498	1,022	540
379 NEBB INST OF NAVAL ARCH	297I	301I	301I	275	188I	185I	185I	194
380 KIRKSVILLE COL OSTEO MED	297I	288I	261I	295I	122I	116I	111I	100I
TOTAL, 1ST 380 INSTS.	7,730,576	7,240,819	6,796,498	6,038,887	4,952,487	4,740,048	4,547,799	4,083,293
381 MERCER UNIVERSITY	288	1,3[illegible]	4	2E	203	116	0	0
382 COLUMBIA U TEACHERS COL	287	340	280	323	88	106	221	217
383 W VA SCHL OSTEOPATHIC MED	278I	258	20	15E	0I	0	0	0
384 COL OF THE HOLY CROSS	260I	253I	253	261	120I	132I	132	139
385 SUNY COLLEGE FREDONIA	257	225	472	332	29	77	171	155
386 ADELPHI UNIVERSITY	254	315	317	399	231	190	160	290
387 UNIV HOUSTN CLR LAKE CITY	251	145	107	0	119	64	78	0
388 SUNY ST COL OF OPTOMETRY	247	276	195	373E	188	209	163	62E
389 ST OLAF COLLEGE	240	102	58	22	214	35	35	20
390 UNION COLLEGE (NY)	230	580	482	526	92	106	195	223
TOTAL, 1ST 390 INSTS.	7,733,168	7,244,722	6,798,686	6,041,140	4,953,781	4,741,0[illegible]	4,548,914	4,084,399
391 SAM HOUSTON STATE UNIV	229	490	720	644	88	277	482	396
392 BAYLOR COL OF DENTISTRY	228	331	283	147	135	112	116	100
393 FISK UNIVERSITY	226I	220	219I	197I	194I	197	219I	197I
394 CANISIUS COLLEGE	213	47	44I	40	115	0	26I	27
395 CALIF ST POLY UNIV POMONA	212	172	564	422	114	126	379	261
396 OBERLIN COLLEGE	212I	207I	207I	186I	132I	134I	134I	121I
397 JOHN CARROLL UNIVERSITY	211	310	222	134	211	310	222	134
398 PHILA COL OF PHARM & SCI	206I	195	188	150E	123I	117	116	85E
399 WEST GEORGIA COLLEGE	205	207	241	258	6	8	38	47
400 KUTZTOWN UNIV OF PENN	202I	195I	180I	159I	83I	83I	83I	75I
TOTAL, 1ST 400 INSTS.	7,735,312	7,247,096	6,801,954	6,043,477	4,954,982	4,742,447	4,550,729	4,085,842

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

– CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
401 NORTH CAROLINA CNTRL UNIV	201I	194I	179I	158E	110I	110I	111I	100E
402 CENTRAL MICHIGAN UNIV	196	235	135	763I	30	30	53	111I
403 VIRGINIA MILITARY INST	196	211	250	180	131	143	193	141
404 GRINNELL COLLEGE	195I	198I	198E	168I	97I	95I	95E	19I
405 FURMAN UNIVERSITY	194	99	101I	91E	118	65	99I	53E
406 CALIF ST UNIV HAYWARD	191	244	246	113E	168	188	172	110E
407 JAMES MADISON UNIVERSITY	187	249	366	425	13	116	226	332
408 CONNECTICUT COLLEGE	186E	186	180E	165E	71E	71	0	0
409 WILLIAM PATERSON COLLEGE	185I	178I	164	153	100I	100I	100	72
410 ILLINOIS BENEDICTINE COL	184I	186	155	96I	49I	48	92	0I
TOTAL, 1ST 410 INSTS.	7,737,227	7,249,076	6,803,538	6,045,789	4,955,869	4,763,413	4,551,839	4,086,780
411 UNIVERSITY OF REDLANDS	177I	172	1,408I	1,446I	170I	172	33I	30I
412 GRAMBLING STATE UNIV	174I	168I	195I	137	150I	150I	151I	137
413 ST JOSEPH'S UNIVERSITY	171I	167	117I	105	94I	95	111I	100
414 NORTHEAST MISSOURI ST U	170I	164I	151	140I	26I	26I	26	97I
415 NORTHEAST LOUISIANA UNIV	167	174	231	199	15	28	93	83
416 MORGAN STATE UNIVERSITY	167I	161I	149I	132I	142I	142I	143I	129I
417 ROCHESTER INST TECHNOLOGY	165	1,266I	1,266	1,701	138	665I	665	521
418 SUNY COLLEGE BROCKPORT	161I	155	130	121E	99I	99	88	35E
419 TRINITY COLLEGE	158E	158	268	99E	104E	104	220	22E
420 ABILENE CHRISTIAN UNIV	155	247	214	196	20	50	39	0
TOTAL, 1ST 420 INSTS.	7,738,892	7,251,906	6,807,817	6,050,065	4,956,827	4,744,944	4,553,408	4,087,904
421 UNIV OF WIS-EAU CLAIRE	152	57	120	91	74	14	80	58
422 COLORADO COLLEGE	148I	150I	150	159	42I	41I	41	42
423 HOFSTRA UNIVERSITY	146	227	228	124	108	141	149	123
424 MANKATO STATE UNIVERSITY	146	116	4	37E	90	60	3	18E
425 SUNY COLLEGE NEW PALTZ	138	1,471I	1,358I	1,201I	31	656I	699I	596I
426 COLLEGE OF WOOSTER	137	130I	130I	119E	73	88I	88I	93E
427 OKLA COL OSTEO MED & SURG	136I	126I	119I	105E	17I	16I	15I	14E
428 WASHINGTON & LEE UNIV	135I	137	174	90	23I	23	24	24
429 WESTERN ST COL COLORADO	134	99	53	11	0	0	0	0
430 BRADLEY UNIVERSITY	134I	131I	171	39	80I	81I	81	36
TOTAL, 1ST 430 INSTS.	7,740,298	7,254,952	6,810,284	6,052,041	4,957,365	4,746,064	4,554,548	4,088,908
431 ALBANY STATE COLLEGE	133	195	170	9	133	195	170	9
432 GOUCHER COLLEGE	130I	132I	132E	107	58I	57I	57	46
433 AIR FORCE INST OF TECH	130	80	73I	65	130	80	72I	65
434 GRAND VALLEY STATE COLS	116	17I	17	3	25	17I	17	2
435 WALLA WALLA COLLEGE	115I	112I	112	96E	75I	76I	76	0
436 LONG ISLAND UNIVERSITY	113	209	386	504	17	90	259	447
437 SUNY COLLEGE ONEONTA	113	104	64	77	73	68	15	31
438 UNIV OF NEBRASKA AT OMAHA	112	319	288	456	2	12	79	323
439 GOVERNORS STATE UNIV	108	80	353	254	97	63	232	214
440 US COAST GUARD ACADEMY	105I	90I	90E	92I	105I	90I	90E	91I
TOTAL, 1ST 440 INSTS.	7,741,473	7,297,890	6,811,969	6,053,704	4,958,080	4,746,812	4,555,611	4,090,136
441 EASTERN NEW MEXICO UNIV	105	136	362	469E	67	55	124	238E
442 EAST TEXAS STATE UNIV	103	157	136I	120	0	0	0I	0
443 OKLA PANHANDLE STATE UNIV	103I	88I	88I	86I	0I	0I	0I	0I
444 PACIFIC LUTHERAN UNIV	102I	99I	99I	89	55I	56I	56I	50
445 NEW SCH FOR SOC RESEARCH	100	260	254I	228E	45	260	247I	222E
446 DE PAUL UNIVERSITY	99	240	309	391	80	202	240	304
447 YOUNGSTOWN ST UNIVERSITY	98	98	385	136I	75	88	277	95I
448 KNOX COLLEGE	98	109	149	9E	69	98	140	0
449 NORTHEASTERN ILL UNIV	96	34	34	7	49	5	0	0
450 WINTHROP COLLEGE	95I	92	210	167	92I	92	101	97
TOTAL, 1ST 450 INSTS.	7,742,472	7,257,223	6,813,995	6,055,606	4,958,612	4,747,668	4,556,796	4,091,102

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
451 SUL ROSS STATE UNIVERSITY	93	47I	43	109	60	15I	15	31
452 UNIV OF ALBUQUERQUE	92	206I	206I	188E	78	179I	179I	188E
453 LINFIELD COLLEGE	91I	92I	92I	84I	25I	25I	25I	26I
454 KEARNEY STATE COLLEGE	81I	78I	72	63E	18I	18I	18E	17E
455 ST MARY'S UNIV S ANTONIO	79I	77I	77E	73	76I	77I	77E	73
456 SUNY COLLEGE OSWEGO	79I	76I	70E	70	45I	45I	45E	45
457 MONTCLAIR STATE COLLEGE	76I	73I	67I	59	18I	18I	18I	16
458 TARLETON STATE UNIVERSITY	73	88	85	110	12	9	9	31
459 UNIV OF WIS-OSHKOSH	73	167	170	118	55	129	117	100
460 DRAKE UNIVERSITY	72	92	208	199	42	45	153	138
TOTAL, 1ST 460 INSTS.	7,743,281	7,258,219	6,815,085	6,056,679	4,959,041	4,748,228	4,557,452	4,091,767
461 DE PAUW UNIVERSITY	68E	69I	69E	69I	0E	0I	0	1I
462 ST JOSEPH COLLEGE	65	225	168	60	0	0	0	8
463 UNIVERSITY OF DALLAS	65I	66I	66I	60E	0I	0I	0I	0E
464 SOUTHERN OREGON ST COL	65	107	107	53	35	92	74	22
465 SIMMONS COLLEGE	64I	65I	65E	65E	55I	54I	54E	54E
466 EASTERN MICHIGAN UNIV	62I	60I	55E	50E	29I	29I	29	24E
467 CARLETON COLLEGE	61	68	179	176	0	16	80	127
468 MIDDNER UNIVERSITY	60	25	63	58E	0E	5	40	0
469 LAKE FOREST COLLEGE	59	14	39	24	59	14	24	13
470 SEATTLE UNIVERSITY	57I	56I	56I	50E	0I	0I	0I	0
TOTAL, 1ST 470 INSTS.	7,743,907	7,258,974	6,815,952	6,057,344	4,959,219	4,748,438	4,557,753	4,092,016
471 FRANKLIN & MARSHALL COL	57I	58I	58	76E	50I	49I	49	0
472 STETSON UNIVERSITY	53I	52E	51E	0	31I	31E	31E	0
473 UNIV OF WIS-STOUT	51	217	287	278	3	88	151	165
474 NORTHERN MICHIGAN UNIV	50	71	276	158	20	48	135	81
475 ST CLOUD STATE UNIVERSITY	46	38	38	23	16	19	11	1
476 PACIFIC UNIVERSITY	44I	43I	43I	39E	0I	0I	0I	0
477 UNIV OF WIS-RIVER FALLS	41	40	59	53	8	15	17	33
478 AUSTIN COLLEGE	41I	42I	42I	38E	8I	8I	8I	8E
479 WESTERN OREGON STATE COLL	40	32I	30	33E	6	30I	30	33E
480 ANDREWS UNIVERSITY	40	28	28	26E	16	4	1	7E
TOTAL, 1ST 480 INSTS.	7,744,370	7,259,595	6,816,864	6,058,068	4,959,377	4,748,730	4,558,186	4,092,344
481 AUGSBURG COLLEGE	39I	40I	40	70E	26I	26I	26	22E
482 SUNY COLLEGE CORTLAND	35	86	61	144	31	57	37	96
483 FAIRFIELD UNIVERSITY	33	22	25	132I	25	13	22	54I
484 BELOIT COLLEGE	32	97	165	9[illegible]	31	81	144	77
485 UNIV OF WIS-WHITEWATER	32	34	28	31	0	0	0	0
486 ROLLINS COLLEGE	31I	30	92	123	0I	0	14	113
487 SUNY COLLEGE GENESEO	31	17I	16I	14	18	2I	2I	2
488 AUGUSTANA COLLEGE	28	12	3	2	4	9	0	0
489 MISS UNIVERSITY FOR WOMEN	27	56	24	0	27	56	24	0
490 BEMIDJI STATE UNIVERSITY	24	26I	24I	21E	0	11I	11I	10E
TOTAL, 1ST 490 INSTS.	7,744,682	7,260,015	6,817,342	6,058,703	4,959,539	4,748,985	4,558,466	4,092,718
491 NORTHWESTERN ST UNIV LA	24I	23I	21E	21E	8I	8I	8E	8E
492 EMPORIA STATE UNIVERSITY	21	30	86	70	1	7	48	43
493 CHAPMAN COLLEGE	21I	20	21	3	0I	0	0	0
494 PROVIDENCE COLLEGE	19I	18I	17I	15	0I	0I	0I	0
495 UNIVERSITY OF PORTLAND	17	35	39	39E	0	14	24	0
496 AUGUSTANA COLLEGE	16	32	39	124	5	29	39	94
497 UNIV OF NORTHERN IOWA	14	10	78	119I	14	10	72	108I
498 MOREHEAD STATE UNIVERSITY	14	35I	32	137	0	4I	4	32
499 UNIV OF WIS-PLATTEVILLE	13	3	4	5	1	0	0	0
500 EAST STROUDSBURG U OF PA	13I	13I	12	0	0I	0I	0	0
TOTAL, 1ST 500 INSTS.	7,744,854	7,260,234	6,817,691	6,059,236	4,959,568	4,749,057	4,558,661	4,093,003

SEE FOOTNOTES AT END OF TABLE.

TABLE B-37. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
501 EDINBORO UNIV OF PENN	12	0	8	20	0	0	0	0
502 TOWSON STATE UNIVERSITY	11	30	57	38	11	30	57	38
503 [illegible] COLLEGE	11I	11I	11I	10I	0I	0I	0I	0I
504 CAL ST COL SAN BERNARDINO	9	9	10	44	3	9	10	17
505 PITTSBURG STATE UNIV	8	8	7	6	0	0	0	0
506 MOORHEAD STATE UNIVERSITY	7	28I	26	47	7	11I	11	19
507 VALPARAISO UNIVERSITY	7	29E	57	37	0	0	0	25
508 HENDERSON STATE UNIV	6	8	22	82	0	0	1	45
509 FULLER THEOLOGICAL SEM	6	30	27	0	0	27	27	0
510 ANTIOCH UNIVERSITY	5E	4E	2I	2E	5E	4E	2I	2E
TOTAL, 1ST 510 INSTS.	7,744,936	7,260,391	6,817,918	6,059,524	4,959,594	4,749,138	4,558,769	4,093,149
511 CLARION UNIV OF PENN	5	0	0	0	5	0	0	0
512 UNIVERSITY OF MONTEVALLO	5E	8E	6	17	0	0	0	0
513 LOYOLA UNIV - NEW ORLEANS	4E	6E	5	38	0	3E	2	12
514 PACIFIC UNION COLLEGE	3E	3E	3	48	3E	2E	2	35
515 ST MARY'S COLLEGE	1E	1	4	0	1E	1	4	0
516 SLIPPERY ROCK UNIV OF PA	0	0	0	0	0	0	0	0
517 OHIO DOMINICAN COLLEGE	0	4	42	2	0	0	0	0
518 MACALESTER COLLEGE	0	0	0	10E	0	0	0	10E
519 HOLLINS COLLEGE	0	0	35	2	0	0	35	0
520 US INTERNATIONAL UNIV	0	0	0	0	0	0	0	0
TOTAL, 1ST 520 INSTS.	7,744,954	7,260,413	6,818,013	6,059,641	4,959,603	4,749,144	4,558,812	4,093,206
521 ROOSEVELT UNIVERSITY	0	0	0	0	0	0	0	0
522 UNIV OF NORTHERN COLORADO	0	0	0	0	0	0	0	0
523 DELTA STATE UNIVERSITY	0	0	38	16	0	0	0	13
524 NEW ENGLAND INSTITUTE	0	0	0	0E	0	0	0	0E
525 WEST CHESTER UNIV OF PENN	0	0	0	0	0	0	0	0
526 MILWAUKEE AREA TECH COL	0I	16B	0	0	0I	83	0	0
527 PRATT INSTITUTE	0	0E	0	0	0	0E	0	0
528 HARTFORD GRADUATE CENTER	0	0	0	0	0	0	0	0
529 JOHN F KENNEDY UNIVERSITY	0	0	0	0	0	0	0	0
530 WAUKESHA COUNTY TECH INST	0	0	0	0	0	0	0	0
TOTAL, 1ST 530 INSTS.	7,744,954	7,260,581	6,818,051	6,059,657	4,959,603	4,749,227	4,558,812	4,093,219
531 SUNY COLLEGE PLATTSBURGH	0	0	0	0	0	0	0	0
532 LAWRENCE UNIVERSITY	0	0	0I	24	0	0	0I	0
533 ORAL ROBERTS UNIVERSITY	0	0E	0E	0E	0	0E	0E	0
534 MONMOUTH COLLEGE (NJ)	0	0	40I	36	0	0	0I	0
535 MOREHOUSE SCHOOL OF MED	-	-	-	-	-	-	-	-
536 CENTRAL STATE UNIV (OK)	0	0	0	0	0	0	0	0
537 COL OF OSTEO MED & SURG	0	0	0	0	0	0	0	0
538 ST LOUIS COMMUNITY COL	0	0I	43	40E	0	0I	43E	40E
539 CAL SCH PROF PSYCH-BERKLY	0	0	0	0	0	0	0	0
540 LINCOLN UNIVERSITY (PA)	0	0	150	230	0	0	150	230
TOTAL, 1ST 540 INSTS.	7,744,954	7,260,581	6,818,284	6,059,987	4,959,603	4,749,227	4,559,005	4,093,489
541 CAL SCH PROF PSYCH-L A	0E	0	0	0	0	0	0	0
542 MAYO GRAD SCHOOL OF MED	-	-	-	-	-	-	-	-
543 CALIFORNIA UNIV OF PENN	0	0	0	0	0	0	0	0
544 RAND GRAD INST POL STDIES	0	0	0	0	0	0	0	0
545 UNION OF EXPER COL & UNIV	0	0	0	0	0	0	0	0
546 CAL SCH PROF PSYCH-S D	0	0	0	0	0	0	0	0
547 MISS VALLEY STATE UNIV	0	0	0	0E	0	0	0	0
548 QUINNIPIAC COLLEGE	0	0	0	0	0	0	0	0
549 ATHENS STATE COLLEGE	0	37	44	43	0	37	44	43
550 UNIVERSITY OF PUGET SOUND	0	0	0E	0	0	0	0E	0
TOTAL, 1ST 550 INSTS.	7,744,954	7,260,618	6,818,328	6,060,030	4,959,603	4,749,264	4,559,049	4,093,532

SEE FOOTNOTES AT END OF TABLE.

TABLE B-27. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
951 CAL SCH PROF PSYCH-FRESNO	0	0	0	0	0	0	0	0
952 DREW POST-GRAD MED SCHOOL	0	0	0	0	0	0	0	0
953 UNIV OF HEALTH SCIENCES	0	0	0	0	0	0	0	0
954 PHILA COL OSTEOPATHIC MED	0	0	0	0	0	0	0	0
955 BRIDGEWATER STATE COLLEGE	0	0	0	0	0	0E	0	0
956 ST BONAVENTURE UNIVERSITY	0	0	0	0	0	0	0	0
957 SEATTLE PACIFIC UNIV	0	7E	5E	4E	0	0E	0E	0E
958 FIELDING INSTITUTE	0	0	0	72	0	0	0	51
959 DILLARD UNIVERSITY	0	0	0	0	0	0	0	0
960 OLIVET NAZARENE COLLEGE	0	0	0	3	0	0	0	3
	0	0	0	0	0	0	0	0
TOTAL, 1ST 960 INSTS.	7,744,954	7,260,625	6,818,323	6,060,109	4,959,603	4,749,264	4,559,049	4,093,586
961 BIOLA UNIVERSITY	0	0	0	0	0	0	0	0
962 COL OSTEO MED OF PACIFIC	0	0	0	0E	0	0	0	0E
963 CONCORDIA COL MOORHEAD	0	0	0	0	0	0	0	0
964 U CTRL DEL CARIBE ESC MED	-	-	-	-	-	-	-	-
965 PONCE SCHOOL OF MEDICINE	-	-	-	-	-	-	-	-
966 NORTHWEST MISSOURI ST U	0E	11E	10I	9E	0E	0	0I	0E
TOTAL, 1ST 966 INSTS.	7,744,954	7,260,636	6,818,343	6,060,118	4,959,603	4,749,264	4,559,049	4,093,586

1/ INCLUDES APPLIED PHYSICS LABORATORY WITH AN ESTIMATED $212 MILLION IN TOTAL AND $204 MILLION IN FEDERALLY FINANCED R&D EXPENDITURES IN FY 1983.

2/ DOES NOT INCLUDE R&D EXPENDITURES AT UNIVERSITY ASSOCIATED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFRDC'S). SEE TABLE B-71.

3/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

4/ BEGINNING IN FY 1983, INCLUDES DATA FOR ROSWELL PARK MEMORIAL INSTITUTE, FORMERLY CLASSIFIED AS A NONPROFIT INSTITUTION.

5/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-28. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1978-83

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1983)	TOTAL 1983	1982	1981	1980	1979	1978
TOTAL, ALL INSTITUTIONS	2,785,351	2,511,372	2,259,294	1,966,532	1,766,137	1,565,939
1 UNIVERSITY OF MINNESOTA	70,422	63,422	55,207	50,602	44,927	41,441
2 UNIV OF WIS-MADISON	68,256	56,901	51,295	48,865	44,131	39,069
3 CORNELL UNIVERSITY	63,188	55,231	41,372	37,028	33,294	28,650
4 TEXAS A & M UNIVERSITY	59,406	54,559	45,833	39,601	35,144	34,471
5 UNIV OF CAL DAVIS 1/	54,679	47,249	44,686	33,351	27,850	25,957
6 UNIV OF TEXAS AT AUSTIN	52,339	39,463	32,924	29,992	24,034	20,633
7 LOUISIANA STATE UNIV	50,339	48,594	41,128	37,190	31,785	31,081
8 UNIVERSITY OF MICHIGAN	48,744	45,317	48,743	35,767	39,639	28,450
9 UNIVERSITY OF GEORGIA	48,231	43,458	39,794	37,642	34,609	31,108
10 UNIVERSITY OF ARIZONA	44,451	44,134	38,314	33,536	26,714	22,044
TOTAL, 1ST 10 INSTS.	560,005	497,928	439,266	383,537	342,127	302,906
11 IOWA ST U OF SCI & TECH	43,811	36,635	34,397	32,640	30,538	27,063
12 UNIV OF CAL BERKELEY 1/	43,034	35,161	33,021	26,250	21,824	20,516
13 UNIVERSITY OF FLORIDA	39,799	35,192	30,858	33,029E	22,790	26,565
14 UNIV OF ILL URBANA	39,229	38,622	36,683	30,947	31,302	31,831
15 MASS INST OF TECHNOLOGY	37,548	35,271	31,963	25,166	20,625	17,489
16 N C STATE UNIV AT RALEIGH	36,623	34,564	31,863	27,114	26,810	22,108
17 MICHIGAN STATE UNIVERSITY	35,976	33,603	34,998	37,524	34,839	30,899
18 GEORGIA INSTITUTE OF TECH	33,391	32,770	28,988	23,826	19,011	15,605
19 PURDUE UNIVERSITY	33,363	25,390	30,966	23,724	21,604	17,990
20 UNIV OF PENNSYLVANIA	32,983	31,822	24,057	22,645	23,020	24,094
TOTAL, 1ST 20 INSTS.	934,822	836,917	757,060	667,402	594,490	537,066
21 PENNSYLVANIA STATE UNIV	32,892	29,011	30,457	26,839	23,195	22,043
22 OHIO STATE UNIVERSITY	32,708E	36,624	32,563	30,097	27,566	24,076
23 UNIV OF NEBRASKA-LINCOLN	31,847	30,282	27,521	22,227	22,972	17,481
24 OKLAHOMA STATE UNIVERSITY	30,099I	28,481	26,110	12,310	15,064	11,433
25 RUTGERS THE ST UNIV OF NJ	30,835	24,295	21,336	20,176	18,773	17,002
26 UNIV OF CAL LOS ANGELES 1/	29,567	25,072	23,136	18,569	15,394	14,288
27 U TEXAS SYSTEM CANCER CTR	29,397	22,809	20,130	16,449	15,607	12,641
28 HARVARD UNIVERSITY	28,778E	27,890E	27,103E	24,524E	21,634E	20,463E
29 ROCKEFELLER UNIVERSITY	28,375	24,959	21,593	18,799	18,346	17,187
30 UNIV OF MISSOURI COLUMBIA	28,088	25,374	24,769	21,017	20,576	18,815
TOTAL, 1ST 30 INSTS.	1,238,268	1,111,714	1,011,778	878,409	793,017	712,495
31 MISSISSIPPI STATE UNIV	27,939	27,022	23,851	20,211	18,609	15,426
32 STANFORD UNIVERSITY	27,899	27,842	13,150	10,475	10,170	9,492
33 OREGON STATE UNIVERSITY	27,193	24,461	24,032	20,044	18,149	15,707
34 UNIVERSITY OF KENTUCKY	27,043	23,897	21,790	16,920	17,040	9,693
35 UNIVERSITY OF OKLAHOMA	26,781	16,262	17,800	10,838	4,507	3,756
36 UNIV OF SOUTHERN CAL	26,419	32,039	28,991	24,303	15,138	12,778
37 UNIV OF CAL RIVERSIDE 1/	25,634	24,322	23,283	16,099	14,[illegible]	13,469
38 UNIVERSITY OF WASHINGTON	25,011	24,057	20,836	18,749	15,69[illegible]	14,087
39 KANS ST U - AG & APP SCI	24,862	23,878	22,165	19,116	17,070	15,111
40 UNIVERSITY OF CONNECTICUT	23,942	21,880	18,[illegible]	16,738	15,026	13,329
TOTAL, 1ST 40 INSTS.	1,500,951	1,357,374	1,226,170	1,051,[illegible]	938,529	835,343
41 UNIV OF CAL SAN DIEGO 1/	23,575	22,694	18,531	13,792	12,375	11,398
42 UNIV OF ALASKA FAIRBANKS	23,466	19,163	17,657	15,567	11,9[illegible]	12,776
43 UNIV OF CAL SAN FRANCISCO 1/	22,212	19,746	16,687	12,254	9,868	9,844
44 VA POLYTECH INST & ST U	21,383	21,942	19,443	17,224	15,545	14,649
45 WASHINGTON STATE UNIV	21,020	21,296	20,523	19,683	15,244	13,315
46 UNIVERSITY OF COLORADO	20,770	12,392E	13,382E	13,424	11,909	9,695
47 JOHNS HOPKINS UNIVERSITY	20,729E	18,717	13,955	13,349	13,509E	11,572
48 UNIV OF ILL CHICAGO 2/	19,948	9,663I	7,352	7,511	5,804	4,119
49 NEW YORK UNIVERSITY	18,684	17,636	15,046	13,034	13,542	14,006
50 BAYLOR COL OF MEDICINE	18,214	12,309	10,679	6,697	7,372	6,101
TOTAL, 1ST 50 INSTS.	1,710,952	1,532,432	1,379,435	1,184,437	1,054,213	942,798

SEE FOOTNOTES AT END OF TABLE.

TABLE B-28. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1978-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1983)	TOTAL 1983	1982	1981	1980	1979	1978
51 AUBURN UNIVERSITY	18,093	15,783	15,235	13,279	14,423	10,801
52 UNIV OF HAWAII-MANOA	17,768	16,823	17,844	14,760	13,203	12,190
53 UTAH STATE UNIVERSITY	17,653	14,699	11,821	9,792	6,649	5,919
54 UNIVERSITY OF ROCHESTER	16,561	15,314	20,303	21,955	21,024	18,151
55 COLORADO STATE UNIVERSITY	16,251	16,580	14,771	12,190	11,375	9,601
56 UNIVERSITY OF MIAMI	16,047	17,809	16,507	12,182	11,159	11,872
57 YALE UNIVERSITY	15,064	15,015	10,444	7,874	9,026	6,309
58 WASHINGTON UNIVERSITY	15,007	12,441	10,671	11,623	11,232	9,955
59 UNIV OF ARK FAYETTEVILLE	14,625	19,826	18,121	18,224	18,146	11,863
60 NORTHWESTERN UNIVERSITY	14,556	13,082	10,674	10,644	8,671	7,082
TOTAL, 1ST 60 INSTS.	1,872,577	1,690,904	1,525,826	1,316,962	1,179,121	1,046,541
61 INDIANA UNIVERSITY	14,449	13,895	8,481	8,029	6,593	5,985
62 UNIVERSITY OF IOWA	14,311	17,135	14,322	11,429	9,551	5,977
63 CLEMSON UNIVERSITY	13,944	14,356	13,269E	12,519	12,184	10,181
64 NORTH DAKOTA STATE UNIV	13,345	13,673	11,464E	10,091	8,185	7,583
65 UNIVERSITY OF CHICAGO	13,329	11,418	8,484	8,318	13,297	13,908
66 COLUMBIA UNIV MAIN DIV	13,273	13,760	15,339	17,678	15,819	14,757
67 CARNEGIE-MELLON UNIV	12,628	10,138	10,227	9,663	8,797	8,766
68 UNIV OF MASS AT AMHERST	12,624	12,834	10,059	6,753	7,723	6,505
69 MONTANA STATE UNIVERSITY	12,587	8,417	7,720	7,233	7,358	6,553
70 ARIZONA STATE UNIVERSITY	12,006	3,671	1,440	999	3,595	1,040
TOTAL, 1ST 70 INSTS.	2,005,073	1,810,201	1,626,631	1,409,674	1,272,223	1,127,796
71 PRINCETON UNIVERSITY	11,990	10,099	7,605	6,926	6,891	5,447
72 FLORIDA STATE UNIVERSITY	11,957	12,492	13,021	12,996	9,357	7,300E
73 ST JOHN'S UNIVERSITY (NY)	11,800E	11,580	10,412	7,883	7,527	6,955
74 SUNY AT BUFFALO	11,714	9,425	9,378	7,773	7,530	7,351
75 SUNY AT STONY BROOK	11,302	11,564	8,960	7,723	6,766	5,861
76 WAYNE STATE UNIVERSITY	11,277	8,639	9,377	8,622	7,583	7,615
77 TULANE UNIVERSITY	11,219	8,593	8,652	4,436	4,197	4,036
78 UNIV OF MAINE ORONO	11,141	10,450	9,794	8,514	5,793	5,630
79 RENSSELAER POLYTECH INST	11,030	8,536	7,754	5,632	3,254	2,211
80 UNIVERSITY OF PITTSBURGH	10,979	11,776	10,057	8,536	8,301	8,425
TOTAL, 1ST 80 INSTS.	2,119,482	1,913,355	1,721,641	1,488,715	1,339,422	1,188,627
81 NEW MEXICO STATE UNIV	10,829	8,584	7,877	3,900	3,144	1,851E
82 SUNY UPSTATE MEDICAL CTR	10,486	9,244	2,316E	2,316E	2,144	1,930I
83 UNIVERSITY OF NEW MEXICO	10,283I	9,009	6,409	5,218	8,279	5,896
84 U TEX MLTH SCI CTR DALLAS	9,895	6,937	5,978	5,715	4,741	4,046
85 UNIV OF P R-MAYAGUEZ	9,826I	8,987I	8,343I	7,273	6,672	7,097E
86 INST OF AGRI UNIV OF TENN	9,748	9,390	8,142	8,833I	7,808I	6,928
87 THOMAS JEFFERSON UNIV	9,512	2,363	2,585	1,793E	1,740	1,515
88 UNIVERSITY OF DELAWARE	9,497	8,335	7,789	7,566	6,246	4,788
89 UNIVERSITY OF VIRGINIA	9,056	6,769	4,805	3,691	2,985	2,537
90 U OF CAL SYS WIDE PROGMS 1/	9,038	6,822	7,015	4,912	3,737	4,124
TOTAL, 1ST 90 INSTS.	2,217,652	1,989,795	1,782,900	1,539,932	1,386,918	1,229,339
91 TEXAS TECH UNIVERSITY	8,935	7,916	7,509	6,669	6,458	5,493
92 UNIVERSITY OF CINCINNATI	8,934	8,513	13,362	12,950	11,495	15,187
93 UNIVERSITY OF UTAH	8,849	8,746	7,313	5,587	5,660	5,641
94 U TEX MLTH SCI CTR S ANTO	8,738	6,022	5,364	3,814	3,383	3,117
95 U TEX MED BRNCH GALVESTON	8,583	7,640	6,263	5,654	5,133	4,281
96 UNIVERSITY OF WYOMING	8,528	7,303	6,620	4,816	3,770	4,005
97 GEORGETOWN UNIVERSITY	8,255	6,884	8,496	7,944	6,389	5,278
98 DUKE UNIVERSITY	8,232	2,417E	4,999	2,901	5,168	5,227
99 LEHIGH UNIVERSITY	8,080	7,232	4,778	4,282	4,091	3,858
100 UNIVERSITY OF KANSAS	8,014I	7,112	2,836	3,193	7,806I	6,919
TOTAL, 1ST 100 INSTS.	2,302,800	2,059,580	1,850,440	1,597,742	1,446,441	1,288,345

SEE FOOTNOTES AT END OF TABLE.

TABLE B-28. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1978-83

— CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1983)	TOTAL 1983	1982	1981	1980	1979	1978
101 CUNY MT SINAI SCH OF MED	7,974	8,301	5,436	5,536	5,244	5,078
102 UNIV OF NEVADA - RENO	7,969E	6,254	1,642	4,325	3,702	3,841
103 CASE WESTERN RESERVE UNIV	7,728	9,082	9,927	10,967	10,245	8,294
104 YESHIVA UNIVERSITY	7,710	7,476	4,700	11,126	6,580	4,670
105 SYRACUSE UNIVERSITY	7,661	9,619	8,431	7,891	5,760	5,198
106 UNIV OF MD COLLEGE PARK	7,580E	6,730	18,836	16,743	12,269	11,980
107 UNIV OF NC AT CHAPEL HILL	7,508	8,476	10,098	7,344	6,530	6,083
108 UNIV OF MED & DENT OF N J	7,375	5,008	4,382	3,299	3,560	2,376
109 WEST VIRGINIA UNIVERSITY	6,508	10,604	8,836	8,285	6,574	4,565
110 CALIFORNIA INST OF TECH	6,484	4,666	5,340	4,929	4,394	3,448
TOTAL, 1ST 110 INSTS.	2,377,297	2,135,796	1,928,068	1,678,187	1,511,299	1,343,878
111 MICHIGAN TECH UNIVERSITY	6,444	5,341	5,046	5,290	4,314	3,869
112 VANDERBILT UNIVERSITY	6,433	5,344	4,629	4,072	3,669	3,464
113 UNIV OF NEW HAMPSHIRE	6,408	5,604	4,465	3,923	3,811	4,250
114 UNIV OF SOUTH CAROLINA	6,371	5,688	2,104I	1,755E	1,688	1,029I
115 SOUTHERN ILL U-CARBONDALE	6,311	5,444	4,608	3,545	3,226	2,557
116 U OF HOUSTON UNIV PARK	6,100	7,273	7,146	6,474	6,604	3,582I
117 WOODS HOLE OCNGRPHIC INST	6,073	4,723	5,162	4,167	3,290	3,491
118 TEMPLE UNIVERSITY	6,065	5,962	4,181	4,927	4,367	4,311
119 UNIVERSITY OF IDAHO	5,957	5,145	11,278	7,319	7,121	7,387
120 UNIV OF VT & ST AGRIC COL	5,955	5,686	5,024	4,045	3,800	3,478
TOTAL, 1ST 120 INSTS.	2,439,414	2,192,006	1,981,711	1,723,704	1,553,189	1,381,296
121 UNIV OF CAL IRVINE 1/	5,809	5,222	5,347	3,092	2,994	2,367
122 UNIV ALABAMA BIRMINGHAM	5,802	5,958	4,786	5,788	4,682	2,933
123 OREGON HLTH SCIENCES UNIV	5,548	7,735	3,564E	4,018	1,940E	1,971I
124 UNIV OF RHODE ISLAND	5,440I	4,600E	2,540	3,085E	2,857	445I
125 MEDICAL COLLEGE OF WIS	5,317I	5,000I	4,445I	3,991	3,243	2,753
126 SOUTH DAKOTA STATE UNIV	5,302	6,479	5,202	4,759	4,341	4,327
127 UNIVERSITY OF DENVER	5,159I	4,828	5,098	3,957	3,980	1,711
128 UNIV OF CAL SANTA BARBARA 1/	5,021	2,469	1,624	2,889	2,457	1,751
129 UNIV OF CENTRAL FLORIDA	5,006	3,673	2,802	2,729	867	-
130 TENNESSEE STATE UNIV	4,991I	4,542	4,131	670E	-	-
TOTAL, 1ST 130 INSTS.	2,492,809	2,242,112	2,021,250	1,758,682	1,580,556	1,399,554
131 RUSH UNIVERSITY	4,985	3,756	4,047	2,620	2,386	2,076
132 U TEX HLTH SCI CTR HOUSTN	4,952	3,661	3,041	2,529	1,839	1,793
133 SUNY COL OF ENV SCI & FOR	4,877I	4,485I	4,184	4,013	4,332	4,195
134 UNIV OF MISSOURI ROLLA	4,746	4,230	3,812	3,357	2,933	2,885
135 INSTITUTE PAPER CHEMISTRY	4,644	4,637	4,418	3,616E	3,430	3,069
136 UNIV OF CAL SANTA CRUZ 1/	4,564	3,854	3,124	2,021	1,843	1,874
137 BOSTON UNIVERSITY	4,515	3,229	2,881	2,155	2,140	1,994
138 UNIV OF WIS-MILWAUKEE	4,468	4,394	4,080	3,324	3,667	3,279
139 UNIVERSITY OF MISSISSIPPI	4,425E	4,398E	4,102	3,755	3,263E	2,993
140 UNIVERSITY OF LOUISVILLE	4,375	3,345	2,491	2,305	3,003	3,808
TOTAL, 1ST 140 INSTS.	2,539,360	2,282,101	2,057,430	1,788,377	1,609,386	1,427,520
141 VIRGINIA COMMONWLTH UNIV	4,237E	3,533	3,392	3,444	2,854	2,261
142 ALBANY MEDICAL COLLEGE	4,202I	3,946	6,488	6,069	4,787	2,780
143 DESERT RESEARCH INSTITUTE	4,146	2,977	3,309	2,839	3,218	2,432
144 EMORY UNIVERSITY	4,121	3,408	2,941	2,167	1,674	1,490
145 SUNY DOWNSTATE MED CTR	3,972	4,043	4,314	3,441	2,605	2,149
146 DARTMOUTH COLLEGE	3,617	2,515	3,750	1,127	994	651
147 U MASS MED SCHL WORCESTER	3,575I	3,135	2,416	1,272	1,374	1,093
148 UNIV OF WEST FLORIDA	3,430	3,901	3,272	2,366	1,365	-
149 N MEX INST MINING & TECH	3,288I	2,935	2,882	2,301	1,810	1,001
150 U OF NEB MED CTR AT OMAHA	3,239	2,673	2,206	2,206	2,219	1,936
TOTAL, 1ST 150 INSTS.	2,577,187	2,315,187	2,092,400	1,815,609	1,632,286	1,443,313

SEE FOOTNOTES AT END OF TABLE.

TABLE B-28. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1978-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONS RANKED BY NON-FEDERAL R&D EXPENDITURES (1983)	TOTAL 1983	1982	1981	1980	1979	1978
151 UNIV OF MISSOURI SYS OFF	3,230	2,900	3,166	3,072	2,727	2,713
152 OLD DOMINION UNIVERSITY	3,182I	2,955I	2,781I	2,460E	121	224
153 BROWN UNIVERSITY	3,077	2,986	2,193	2,575	2,221	1,929
154 WRIGHT STATE UNIVERSITY	3,051	2,496	2,709	1,958	1,560	2,631
155 SUNY AT ALBANY	3,024	2,100	2,053	1,505E	1,474	1,328
156 SUNY AT BINGHAMTON	3,003	1,635	1,299	1,240	929	529
157 FLORIDA A & M UNIVERSITY	2,986I	2,829	394	1911	117	-
158 U TENNESSEE KNOXVILLE	2,979I	2,513	3,940	3,573E	3,573	3,330
159 UNIV OF SOUTH FLORIDA	2,959	2,635	2,790	2,012	1,800	1,647
160 UNIVERSITY OF OREGON MAIN	2,954	2,241	1,912	1,211	1,378	1,164
TOTAL, 1ST 160 INSTS.	2,607,632	2,340,477	2,115,197	1,835,006	1,648,186	1,458,808
161 UNIVERSITY OF DAYTON	2,946	2,386	1,330	1,690	2,214	1,994
162 GEORGE WASHINGTON UNIV	2,846	4,194	2,638	2,181	2,685	2,182
163 OHIO UNIVERSITY	2,836	3,260	2,030	1,587	1,132	342
164 BRIGHAM YOUNG UNIVERSITY	2,781	2,483	2,761I	2,481E	2,298	2,177
165 UNIV TENN CTR HEALTH SCI	2,771	1,754	1,538	1,347	1,717	1,244
166 MED UNIV OF SO CAROLINA	2,718	2,235	1,980	1,841	810	1,244
167 WORCESTER POLY INSTITUTE	2,649	2,394	1,517	1,661	2,221	1,859
168 NORTHERN ILLINOIS UNIV	2,628	2,798	3,932	2,665	2,136	213
169 UNIV OF TEXAS AT DALLAS	2,515	1,883	1,806	2.065	1,456	983
170 NEW YORK INST TECHNOLOGY	2,509	2,365I	2,197E	2,197	2,220	-
TOTAL, 1ST 170 INSTS.	2,634,831	2,366,229	2,136,926	1,854,721	1,667,075	1,470,646
171 UNIVERSITY OF N DAKOTA	2,500	2,856	1,211I	983E	932I	821
172 BRANDEIS UNIVERSITY	2,499	3,167	1,176	712	547	257
173 RICE UNIVERSITY	2,466I	2,301E	2,191	1,845	1,549I	1,382
174 NORTH TEXAS STATE UNIV	2,425	2,141	1,637	1,486E	1,448	1,419
175 TUFTS UNIVERSITY	2,419I	2,240I	1,793E	1,724	2,575E	2,482I
176 HOWARD UNIVERSITY	2,288	2,066	2,183	3,486	1,500	2,028
177 U OF MD CENTER FOR EES	2,220	2,179	2,149	2,555	1,840	1,557
178 UNIVERSITY OF MONTANA	2,208	1,997	1,431	1,359	2,232	1,166
179 CATHOLIC UNIV OF P R	2,180	1,731	1,498	127I	115	0E
180 CALIF ST COL STANISLAUS	2,195	1,948	1,734	1,684	82	-
TOTAL, 1ST 180 INSTS.	2,658,191	2,388,855	2,153,929	1,870,682	1,679,895	1,481,758
181 LOYOLA UNIV - CHICAGO	1,982	1,803	1,132	698I	640E	610
182 UNIV OF ARK PINE BLUFF	1,981I	1,697	1,493	1,458	1,379	-
183 MED COL OF OHIO AT TOLEDO	1,848I	1,615I	1,437E	1,437	945	825
184 SAN JOSE STATE UNIVERSITY	1,844I	1,622	702	473I	386E	-
185 STEVENS INSTITUTE OF TECH	1,781	1,780	1,740	1,670	1,574	1,803
186 UNIV OF MD BALT PROF SCH	1,735I	1,329I	1,003	1,766	1,148	1,171
187 SAN DIEGO STATE UNIV	1,722	1,547	726	861	1,076	872
188 U HLTH SCI/CHCGO MED SCH	1,712I	1,616	1,494	327I	296	184
189 UNIV OF P R-RIO PIEDRAS	1,702I	1,951I	1,435I	1,247I	1,103I	979
190 COLORADO SCHOOL OF MINES	1,699	990	1,252	769	879I	777
TOTAL, 1ST 190 INSTS.	2,676,217	2,404,405	2,166,343	1,881,388	1,689,321	1,488,979
191 NORTHEASTERN UNIVERSITY	1,645I	1,533	1,726	927I	857	1,110
192 LOUISIANA TECH UNIVERSITY	1,616	1,113	760E	560	598	600
193 UNIVERSITY OF NOTRE DAME	1,616	1,389	1,187	1,029	991	782
194 DREXEL UNIVERSITY	1,605	1,556	1,694	1,407	1,113	1,638
195 NEW YORK MEDICAL COLLEGE	1,586	1,031	994	870E	870	928
196 ST LOUIS UNIVERSITY	1,571	1,644I	1,400E	1,556E	1,556	621E
197 NEW MEXICO HIGHLANDS UNIV	1,549	65I	36I	26	149	-
198 WAKE FOREST UNIVERSITY	1,479I	1,376I	1,138E	1,084E	1,025E	969
199 UNIVERSITY OF LOWELL	1,468	924I	823	719	708	532
200 U OF ARKANSAS MED SCI CAM	1,457	1,764	1,110	1,236	869	853
TOTAL, 1ST 200 INSTS.	2,691,809	2,416,800	2,177,221	1,890,802	1,698,057	1,497,012
TOTAL, ALL OTHER INSTS.	93,542	94,572	82,073	75,730	68,080	68,927

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1983

DOCTORATE-GRANTING INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	7,610,529	4,877,540	581,970	362,635	1,212,415	575,969
1 JOHNS HOPKINS UNIVERSITY	303,115E	282,386E	2,730E	207E	5,021E	12,771E
2 MASS INST OF TECHNOLOGY	200,349	162,801	802	17,944	1,532	17,270
3 UNIV OF WIS-MADISON	168,282	109,096	23,482	4,502	20,057	10,215
4 STANFORD UNIVERSITY	163,031	135,172	424	6,430	11,421	9,584
5 UNIVERSITY OF MINNESOTA	156,189	85,767	15,678	4,916	33,662	16,166E
6 CORNELL UNIVERSITY	153,322	90,185	24,586	9,206	17,547	11,799
7 UNIV OF CAL SAN DIEGO 1/	147,008	123,433	496	0	11,017	12,062
8 UNIVERSITY OF WASHINGTON	133,523	108,512	5,833	6,176	1,252	11,750
9 UNIVERSITY OF MICHIGAN	122,864	84,120	1,876	5,984	29,031	11,853
10 UNIV OF CAL BERKELEY 1/	118,951	76,917	3,325	0	31,158	7,551
TOTAL, 1ST 10 INSTS.	1,676,635	1,249,319	89,232	55,365	161,698	121,021
11 HARVARD UNIVERSITY	118,602E	89,824	330E	4,695E	7,506E	16,247E
12 COLUMBIA UNIV MAIN DIV	113,847	100,574	54	326	1,800	11,083
13 UNIV OF PENNSYLVANIA	113,499	80,516	606	1,821	12,617	17,939
14 UNIV OF CAL LOS ANGELES 1/	113,266	83,699	840	0	12,891	15,836
15 UNIV OF TEXAS AT AUSTIN	110,570	58,231	5,693	1,790	34,493	10,403
16 TEXAS A & M UNIVERSITY	103,219	43,813	41,055	6,483	3,106	8,762
17 YALE UNIVERSITY	100,249	85,205	2,787	1,316	9,659	1,302
18 UNIV OF ILL URBANA	99,135	59,806	5,282	3,448	27,372	3,227
19 UNIV OF CAL DAVIS 1/	98,118	43,439	4,226	0	41,735	8,718
20 PENNSYLVANIA STATE UNIV	89,767	56,875	2,008	12,445	18,248	191
TOTAL, 1ST 20 INSTS.	2,736,927	1,951,301	152,113	87,659	331,125	214,729
21 UNIV OF CAL SAN FRANCISCO 1/	89,247	67,035	1,185	0	7,957	13,470E
22 UNIVERSITY OF ARIZONA	89,192	44,741	18,237	7,956	13,782	4,476
23 UNIV OF SOUTHERN CAL	84,395	57,976	3,400	2,012	17,242	3,765
24 GEORGIA INSTITUTE OF TECH	82,924	49,533	1,765	13,255	18,371	0
25 MICHIGAN STATE UNIVERSITY	79,043	43,067	14,601	619	18,334	2,422
26 UNIVERSITY OF COLORADO	75,798	55,028	1,642	1,542	8,957	8,629
27 PURDUE UNIVERSITY	75,510	42,147	9,545	9,269	11,956	2,593
28 UNIVERSITY OF CHICAGO	75,314	61,985	1,067	94:	6,818	4,503
29 OHIO STATE UNIVERSITY	74,146E	41,438E	9,206E	6,014E	8,003E	9,485E
30 UNIVERSITY OF FLORIDA	73,467	33,708	3,200	4,345	25,647	6,567
TOTAL, 1ST 30 INSTS.	3,535,943	2,447,959	215,961	133,612	467,792	270,639
31 UNIVERSITY OF GEORGIA	70,645	22,434	815	4,486	42,227	703
32 WASHINGTON UNIVERSITY	69,2[illegible]	54,350	360	5,601	4,400	4,646
33 NEW YORK UNIVERSITY	68,544	49,860	323	2,649	7,440	8,272
34 LOUISIANA STATE UNIV	68,383	18,044	27,575	1,834	17,215	3,715
35 UNIVERSITY OF ROCHESTER	65,305	48,744	1,700	6,481	2,624	5,756
36 IOWA ST U OF SCI & TECH	64,861	21,090	17,242	2,957	20,778	2,834
37 OREGON STATE UNIVERSITY	62,723	35,530	14,052	3,424	2,203	7,514
38 N C STATE UNIV AT RALEIGH	59,909	23,286	28,442	3,246	4,502	433
39 UNIVERSITY OF CONNECTICUT	58,902	34,960	1,344	1,743	11,155	9,700
40 DUKE UNIVERSITY	55,040	46,808	432	3,166	2,014	2,618
TOTAL, 1ST 40 INSTS.	4,179,652	2,803,025	308,246	169,199	582,352	316,830
41 BAYLOR COL OF MEDICINE	54,986	36,772	92	4,726	6,625	6,771
42 UNIVERSITY OF IOWA	54,771	[illegible],460	338	1,490	10,363	2,120
43 YESHIVA UNIVERSITY	53,812	46,102	0	0	4,042	3,668
44 ROCKEFELLER UNIVERSITY	52,000	23,625	181	2,661	18,775	6,758
45 NORTHWESTERN UNIVERSITY	51,075	36,519	144	1,365	7,577	5,470
46 UNIV OF NC AT CHAPEL HILL	50,892	43,384	2,434	594	2,990	1,490
47 SUNY AT BUFFALO	50,129	38,415	430	0	8,798	2,486
48 CALIFORNIA INST OF TECH	49,824	43,340	780	2,445	510	2,749
49 RUTGERS THE ST UNIV OF NJ	49,729	18,894	7,585	1,694	19,373	2,183
50 UNIVERSITY OF MIAMI	48,283	32,236	841	4,384	8,685	2,137
TOTAL, 1ST 50 INSTS.	4,695,153	3,162,772	321,071	188,558	670,090	352,662

SEE FOOTNOTES AT END OF TABLE.

TABLE B-29. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1983

- CONTINUED

DOCTORATE-GRANTING INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 UNIVERSITY OF PITTSBURGH	47,313	36,334	217	2,919	3,284	4,559
52 UNIVERSITY OF UTAH	46,830	37,981	877	1,888	3,251	2,833
53 UNIV OF HAWAII-MANOA	45,401	27,633	15,441	723	1,159	445
54 UNIV OF NEBRASKA-LINCOLN	44,597	12,790	1,710	1,203	26,616	2,318
55 U TEXAS SYSTEM CANCER CTR	44,509	15,112	0	0	20,894	8,503
56 UNIV OF ILL CHICAGO 2/	44,497	24,549	469	1,022	14,795	3,662
57 INDIANA UNIVERSITY	44,331	29,882	911	2,402	8,029	3,107
58 UNIV OF MISSOURI COLUMBIA	44,231	16,143	9,065	1,492	14,392	3,139
59 CARNEGIE-MELLON UNIV	43,174	30,546	739	7,922	414	3,553
60 CASE WESTERN RESERVE UNIV	42,691	34,963	190	1,720	2,209	3,609
TOTAL, 1ST 60 INSTS.	5,142,727	3,428,665	350,690	209,849	765,133	388,390
61 OKLAHOMA STATE UNIVERSITY	42,903I	11,944I	2,301I	2,283I	26,375I	0
62 WOODS HOLE OCNGRPHIC INST	42,070	35,997	62	1,126	1,476	3,409
63 NEW MEXICO STATE UNIV	41,579	30,750	4,846	0	583	5,400
64 COLORADO STATE UNIVERSITY	41,572	25,321	6,103	6,426	2,857	865
65 UNIVERSITY OF OKLAHOMA	40,987	14,206	447	2,260	23,440	634
66 UNIVERSITY OF KENTUCKY	40,829	13,786	12,448	3,007	11,588	0
67 VA POLYTECH INST & ST U	40,420	19,037	12,650	6,110	2,623	0
68 UNIV OF MD COLLEGE PARK	38,674E	31,094	3,637E	1,136E	2,807E	0
69 UNIVERSITY OF VIRGINIA	37,620	28,564	1,122	2,342	2,179	3,413
70 UNIV OF ALASKA FAIRBANKS	37,325	13,859	4,450	3,143	14,649	1,224
TOTAL, 1ST 70 INSTS.	5,546,306	3,652,823	398,756	237,682	853,710	403,335
71 UNIV OF CAL RIVERSIDE 1/	37,236	11,602	1,965	0	21,327	2,342E
72 PRINCETON UNIVERSITY	37,017	25,027	100	805	7,989	3,096
73 SUNY AT STONY BROOK	36,941	25,639	1,098	898	5,582	3,724
74 UTAH STATE UNIVERSITY	36,711	19,058	7,928	1,141	7,056	1,528
75 U TEX HLTH SCI CTR DALLAS	36,456	26,561	13	2,792	131	6,959
76 MISSISSIPPI STATE UNIV	35,714	7,775	766	1,229	24,618	1,326
77 KANS ST U - AG & APP SCI	35,130	10,268	14,704	1,120	6,757	2,281
78 WASHINGTON STATE UNIV	33,583	12,563	18,158	1,517	0	1,345
79 UNIVERSITY OF NEW MEXICO	33,356I	23,073I	3,468I	3,019I	2,550I	1,246I
80 UNIV OF CAL IRVINE 1/	33,293	27,484	602	0	2,108	3,099
TOTAL, 1ST 80 INSTS.	5,901,743	3,841,873	447,358	250,203	931,828	430,281
81 BOSTON UNIVERSITY	32,421	27,906	647	812	6	3,050
82 UNIV ALABAMA BIRMINGHAM	31,311	25,509	114	2,265	1,817	1,606
83 UNIV OF MASS AT AMHERST	29,696	17,072	3,224	2,018	6,422	960
84 UNIVERSITY OF CINCINNATI	29,008	20,074	74	1,262	3,400	4,198
85 CUNY MT SINAI SCH OF MED	28,561	20,587	137	1,145	2,132	4,560
86 VANDERBILT UNIVERSITY	26,322	19,889	555	2,403	1,728	1,747
87 VIRGINIA COMMONWLTH UNIV	26,235	21,998E	216E	350E	1,774E	1,897E
88 AUBURN UNIVERSITY	26,176	8,083	9,879	1,904	1,557	4,753
89 UNIV OF RHODE ISLAND	24,766I	19,326I	5,440I	0	0	0
90 U TEX HLTH SCI CTR S ANTO	24,743	16,005	143	2,237	3,672	2,686
TOTAL, 1ST 90 INSTS.	6,180,982	4,038,322	467,987	264,599	954,336	455,738
91 TEMPLE UNIVERSITY	24,632	18,567	141	308	1,595	4,021
92 EMORY UNIVERSITY	24,284	20,163	335	1,957	223	1,606
93 WAYNE STATE UNIVERSITY	23,990	12,713	369	894	6,207	3,307E
94 RENSSELAER POLYTECH INST	23,084	12,054	277	3,589	6,001	1,163
95 UNIV OF CAL SANTA BARBARA 1/	22,884	17,863	413	0	2,466	2,142E
96 BROWN UNIVERSITY	22,805	19,728	300	1,527	850	400
97 FLORIDA STATE UNIVERSITY	22,767	10,810	488	98	10,738	633
98 TULANE UNIVERSITY	22,440	11,221	313	2,410	4,864	3,632
99 ARIZONA STATE UNIVERSITY	22,294	10,288	3,970	1,373	5,796	867
100 UNIVERSITY OF KANSAS	22,111I	14,097I	5,018I	0	2,513I	483I
TOTAL, 1ST 100 INSTS.	6,412,273	4,185,826	479,611	276,755	995,589	474,492
TOTAL, ALL OTHER INSTS.	1,198,256	691,714	102,359	85,880	216,826	101,477

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1983

– CONTINUED

MASTER'S-GRANTING INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	108,651	62,684	15,333	6,761	16,413	7,460
1 TENNESSEE STATE UNIV	11,798I	6,807I	1,859I	502I	1,654I	976I
2 SAN JOSE STATE UNIVERSITY	5,795I	3,951I	580I	877	373I	14I
3 UNIV OF WEST FLORIDA	5,231	1,801	1,629	26	1,744	31
4 NC AG & TECH STATE UNIV	4,745	4,488	257E	0	0	0E
5 PRAIRIE VIEW A & M UNIV	4,232I	3,768I	288I	0	0	176I
6 FLORIDA A & M UNIVERSITY	4,227I	1,241I	1,711I	288I	987I	0
7 UNIV OF MASS BOSTON	3,366	2,265	172I	0	353I	576I
8 UNIVERSITY OF GUAM	2,633	1,231	433	0	646	323
9 SOUTHERN U & A&M COLLEGE	2,401	2,401	0	0	0	0
10 GALLAUDET COLLEGE	2,235	2,115	120	0	0	0
TOTAL, 1ST 10 INSTS.	46,663	30,068	7,049	1,693	5,757	2,096
11 CALIF ST COL STANISLAUS	2,155	0	0	0	2,155	0
12 VIRGINIA STATE UNIVERSITY	2,109I	1,862I	77I	26I	87I	57I
13 ALABAMA A & M UNIVERSITY	2,057	2,057	0	0	0	0
14 NEW MEXICO HIGHLANDS UNIV	1,966	417	1,549	0	0	0
15 CUNY BROOKLYN COLLEGE	1,814I	1,052I	0	0	762I	0
16 EASTERN WASHINGTON UNIV	1,802I	797I	782I	3I	202I	18I
17 SUNY COLLEGE BUFFALO	1,698I	1,436I	98I	29I	80I	57I
18 CUNY QUEENS COLLEGE	1,626	865	95	79	446	141
19 SAN FRANCISCO STATE UNIV	1,582	1,381	32	65	74	30
20 TEXAS A & I UNIVERSITY	1,572	334	34	69	0	1,135
TOTAL, 1ST 20 INSTS.	65,044	46,267	9,716	1,964	9,563	3,534
21 UNIV OF NEVADA LAS VEGAS	1,448	1,363	83I	4I	98I	0
22 OCCIDENTAL COLLEGE	1,278	182	0	1,030	54	12
23 CALIF ST UNIV LOS ANGELES	1,277	1,048	12	15	113	89
24 JACKSON STATE UNIVERSITY	1,266I	897I	66I	117I	37I	149I
25 MURRAY STATE UNIVERSITY	1,164	314E	32	0	788E	30
26 MONT COL MINRL SCI & TECH	1,149	814	50	173	112	0
27 MANHATTAN COLLEGE	1,133	972	0	0	153	8
28 CALIF ST UNIV LONG BEACH	1,082	736	114	206	0	26
29 MCNEESE STATE UNIVERSITY	1,072	940	121	3	8	0
30 UNIV OF WIS-SUPERIOR	1,066	954	5	10	97	0
TOTAL, 1ST 30 INSTS.	76,979	48,387	10,199	3,522	11,023	3,848
31 CENTRAL WASHINGTON UNIV	1,009	90	616	5	298	0
32 TUSKEGEE INSTITUTE	998E	998E	0	0	0	0
33 CALIF ST UNIV FULLERTON	968	329	565	20	0	54
34 HARVEY MUDD COLLEGE	950	225	0	696	29	0
35 UNIVERSITY OF D C	910	505	0	0	405	0
36 SOUTHWEST MISSOURI ST U	855	110	83	81	547	34
37 WESTERN ILLINOIS UNIV	811	160	245	84	287	35
38 XAVIER UNIVERSITY	757I	299I	70I	136I	16I	236I
39 CAL POLY ST U SAN LUIS OB	752I	270I	230I	245I	7I	0
40 TRINITY UNIVERSITY	723I	594I	5I	0	69I	55I
TOTAL, 1ST 40 INSTS.	85,712	51,967	12,013	4,789	12,681	4,262
41 CUNY BERNARD BARUCH COL	715I	154I	0	253I	140I	168I
42 U TENNESSEE CHATTANOOGA	683I	107I	0	0	0	576I
43 WESTERN WASHINGTON UNIV	621	260	14	214	133	0
44 WILLIAMS COLLEGE	600E	338E	0	0	262I	0
45 MOUNT HOLYOKE COLLEGE	582	366	0	21	68	127
46 MILWAUKEE SCHOOL OF ENG	541I	0I	0	0	432I	109I
47 CALIF STATE UNIV CHICO	528	59	273	145	0	51
48 UNIV OF SAN FRANCISCO	514	325	0	68	71	50
49 TEXAS SOUTHERN UNIV	497	396	0	0	25	76
50 UNIV OF WIS-GREEN BAY	494	396	0	11	48	39
TOTAL, 1ST 50 INSTS.	91,487	54,368	12,300	5,501	13,860	5,458
TOTAL, ALL OTHER INSTS.	17,164	8,316	3,033	1,260	2,553	2,002

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-29. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY HIGHEST DEGREE GRANTED AND SOURCE OF FUNDS: FISCAL YEAR 1983

- CONTINUED

OTHER INSTITUTIONS

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	25,774	19,379	1,738	772	1,951	1,934
1 UNIV OF ARK PINE BLUFF	3,744I	1,763I	1,513I	29I	420I	19I
2 US NAVAL ACADEMY	2,037	2,037	0	0	0	0
3 WELLESLEY COLLEGE	1,643	844	0	0	0	799
4 SOUTH CAROLINA ST COLLEGE	1,478I	1,473I	0	0	5I	0
5 U OF MD EASTERN SHORE	1,376E	1,032E	0	0	344I	0
6 WENTWORTH INST OF TECH	1,327	1,327	0	0	0	0
7 KENTUCKY STATE UNIVERSITY	1,101I	1,101I	0	0	0	0
8 ALCORN STATE UNIVERSITY	1,006I	1,004I	1I	0	1I	0
9 POMONA COLLEGE	959I	912I	0	0	0	47I
10 COL OF THE VIRGIN ISLANDS	832I	714I	107I	0	11I	0
TOTAL, 1ST 10 INSTS.	15,503	12,207	1,621	29	781	865
11 AMHERST COLLEGE	816	723	0	20	0	73
12 EMMANUEL COLLEGE	722I	722I	0	0	0	0
13 NORFOLK STATE UNIVERSITY	696I	694I	1I	1I	0	0
14 US AIR FORCE ACADEMY	665	665	0	0	0	0
15 BARNARD COLLEGE	658	370	0	103I	154I	31I
16 DENISON UNIVERSITY	653I	277I	0	0	34I	352I
17 CUNY YORK COLLEGE	583	541	39	0	3	0
18 BOWDOIN COLLEGE	530	143	60	120	87	132
19 UNIV OF WIS-PARKSIDE	479	337	0	63	21	58
20 REGIS COLLEGE	447	447	0	0	0	0
TOTAL, 1ST 20 INSTS.	21,752	17,116	1,721	344	1,060	1,511
21 US MILITARY ACADEMY	441I	58I	0	0	383I	0
22 REED COLLEGE	315	269	0	0	1	45
23 HAVERFORD COLLEGE	302I	277I	0	0	6I	19I
24 NERB INST OF NAVAL ARCH	297I	188I	0	109I	0	0
25 ST OLAF COLLEGE	240	214	0	13	0	13
26 CANISIUS COLLEGE	213	115	0	20	73	5
27 VIRGINIA MILITARY INST	196	131	10	55	0	0
28 GRINNELL COLLEGE	195I	97I	0	5I	37I	56I
29 ILLINOIS BENEDICTINE COL	184I	49I	0	61I	74I	0
30 COLORADO COLLEGE	148I	42I	0	0	25I	81I
TOTAL, 1ST 30 INSTS.	24,283	18,556	1,731	607	1,659	1,730
31 COLLEGE OF WOOSTER	137	73	0	46I	12I	3I
32 WASHINGTON & LEE UNIV	135I	23I	0	0	103I	9I
33 ALBANY STATE COLLEGE	133	133	0	0	0	0
34 GOUCHER COLLEGE	130I	58I	0	0	72I	0
35 US COAST GUARD ACADEMY	105I	105I	0	0	0	0
36 OKLA PANHANDLE STATE UNIV	103I	0I	0	47I	0	56I
37 KNOX COLLEGE	98	69	0	12	17	0
38 UNIV OF ALBUQUERQUE	92	78	0	0	14	0
39 LINFIELD COLLEGE	91I	25I	0	6I	31I	29I
40 UNIVERSITY OF DALLAS	65I	0I	0	0	22I	43I
TOTAL, 1ST 40 INSTS.	25,372	19,120	1,731	721	1,930	1,870
41 SIMMONS COLLEGE	64I	55I	0	0	5I	4I
42 CARLETON COLLEGE	61	0	0	40	0	21
43 LAKE FOREST COLLEGE	59	59	0	0	0	0
44 FRANKLIN & MARSHALL COL	57I	50I	0	0	7I	0
45 AUSTIN COLLEGE	41I	8I	0	0	0	33I
46 AUGSBURG COLLEGE	39I	26I	7I	0	0	6I
47 FAIRFIELD UNIVERSITY	33	25	0	4	4	0
48 BELOIT COLLEGE	32	31	0	0	1	0
49 AUGUSTANA COLLEGE	16	5	0	7	4	0
50 CONCORDIA COL MOORHEAD	0	0	0	0	0	0
TOTAL, 1ST 50 INSTS.	25,774	19,379	1,738	772	1,951	1,934

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-30. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	7,744,954	4,959,603	599,041	370,168	1,230,779	585,363
1 JOHNS HOPKINS UNIVERSITY	303,115E	282,386E	2,730E	207E	5,021E	12,771E
2 MASS INST OF TECHNOLOGY	200,349	162,801	802	17,944	1,532	17,270
3 UNIV OF WIS-MADISON	168,282	100,026	33,482	4,502	20,057	10,215
4 STANFORD UNIVERSITY	163,031	135,172	424	6,430	11,421	9,584
5 UNIVERSITY OF MINNESOTA	156,189	85,767	15,678	4,916	33,662	16,166E
6 CORNELL UNIVERSITY	153,323	90,185	24,586	9,206	17,547	11,799
7 UNIV OF CAL SAN DIEGO 1/	147,008	123,433	496	0	11,017	12,062
8 UNIVERSITY OF WASHINGTON	133,523	108,512	5,833	6,176	1,252	11,750
9 UNIVERSITY OF MICHIGAN	132,864	84,120	1,876	5,984	29,031	11,853
10 UNIV OF CAL BERKELEY 1/	118,951	76,917	3,325	0	31,158	7,551
TOTAL, 1ST 10 INSTS.	1,676,635	1,249,319	89,232	55,365	161,698	121,021
11 HARVARD UNIVERSITY	118,602E	89,824	330E	4,695E	7,906E	15,247E
12 COLUMBIA UNIV MAIN DIV	113,847	100,574	54	336	1,800	11,083
13 UNIV OF PENNSYLVANIA	113,499	80,516	606	1,821	12,617	17,939
14 UNIV OF CAL LOS ANGELES 1/	113,266	83,699	840	0	12,891	15,836
15 UNIV OF TEXAS AT AUSTIN	110,570	58,231	5,693	1,750	34,493	10,403
16 TEXAS A & M UNIVERSITY	103,219	43,813	41,055	6,483	3,106	8,762
17 YALE UNIVERSITY	100,269	85,205	2,787	1,316	9,699	1,302
18 UNIV OF ILL URBANA	99,135	59,806	5,282	3,448	27,372	3,227
19 UNIV OF CAL DAVIS 1/	98,118	43,439	4,226	0	41,735	8,718
20 PENNSYLVANIA STATE UNIV	89,767	56,875	2,008	12,445	18,248	191
TOTAL, 1ST 20 INSTS.	2,736,927	1,951,301	152,113	87,699	331,125	214,729
21 UNIV OF CAL SAN FRANCISCO 1/	89,247	67,035	1,185	0	7,957	13,470E
22 UNIVERSITY OF ARIZONA	89,192	44,741	18,237	7,956	13,782	4,476
23 UNIV OF SOUTHERN CAL	84,395	57,976	3,400	2,012	17,242	3,765
24 GEORGIA INSTITUTE OF TECH	82,924	49,533	1,765	13,295	18,371	0
25 MICHIGAN STATE UNIVERSITY	79,043	43,067	14,601	619	18,334	2,422
26 UNIVERSITY OF COLORADO	75,798	55,028	1,642	1,542	8,957	8,629
27 PURDUE UNIVERSITY	75,510	42,147	9,545	9,269	11,956	2,593
28 UNIVERSITY OF CHICAGO	75,314	61,985	1,067	941	6,818	4,503
29 OHIO STATE UNIVERSITY	74,146E	41,438E	9,206E	6,014E	8,003E	9,485E
30 UNIVERSITY OF FLORIDA	73,467	33,708	3,200	4,345	25,647	6,567
TOTAL, 1ST 30 INSTS.	3,535,963	2,447,959	215,961	133,612	467,792	270,639
31 UNIVERSITY OF GEORGIA	70,665	22,434	815	4,486	42,227	703
32 WASHINGTON UNIVERSITY	69,357	54,350	360	5,601	4,400	4,646
33 NEW YORK UNIVERSITY	68,544	49,860	323	2,649	7,440	8,272
34 LOUISIANA STATE UNIV	68,383	18,044	27,575	1,834	17,215	3,715
35 UNIVERSITY OF ROCHESTER	65,305	48,744	1,700	6,481	2,624	5,756
36 IOWA ST U OF SCI & TECH	64,861	21,090	17,242	2,957	20,778	2,834
37 OREGON STATE UNIVERSITY	62,723	35,530	14,052	3,424	2,203	7,514
38 N C STATE UNIV AT RALEIGH	59,909	23,286	28,442	3,2[illegible]	4,502	433
39 UNIVERSITY OF CONNECTICUT	58,902	34,960	1,344	1,[illegible]43	11,155	9,700
40 DUKE UNIVERSITY	55,040	46,808	432	[illegible],166	2,016	2,618
TOTAL, 1ST 40 INSTS.	4,179,652	2,803,025	308,344	169,199	582,352	316,830
41 BAYLOR COL OF MEDICINE	54,986	36,772	[illegible]2	4,726	6,625	6,771
42 UNIVERSITY OF IOWA	54,771	40,460	338	1,490	10,363	2,120
43 YESHIVA UNIVERSITY	53,812	46,[illegible]0	0	0	4,042	3,668
44 ROCKEFELLER UNIVERSITY	52,000	23,625	181	2,461	18,775	6,758
45 NORTHWESTERN UNIVERSITY	51,075	36,519	144	1,365	7,577	5,470
46 UNIV OF NC AT CHAPEL HILL	50,892	43,384	2,434	594	2,990	1,490
47 SUNY AT BUFFALO	50,129	38,415	430	0	8,798	2,486
48 CALIFORNIA INST OF TECH	49,824	43,340	780	2,445	510	2,749
49 RUTGERS THE ST UNIV OF NJ	49,729	18,894	7,585	1,694	19,373	2,183
50 UNIVERSITY OF MIAMI	48,283	32,236	841	4,384	8,685	2,137
TOTAL, 1ST 50 INSTS.	4,695,153	3,162,772	321,071	188,558	670,090	352,662

SEE FOOTNOTES AT END OF TABLE.

TABLE B-30. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 UNIVERSITY OF PITTSBURGH	47,313	36,334	217	2,919	3,284	4,559
52 UNIVERSITY OF UTAH	46,830	37,981	877	1,888	3,251	2,833
53 UNIV OF HAWAII-MANOA	45,401	27,633	15,441	723	1,159	445
54 UNIV OF NEBRASKA-LINCOLN	44,397	12,790	1,710	1,203	26,616	2,318
55 U TEXAS SYSTEM CANCER CTR	44,909	15,112	0	0	20,894	8,903
56 UNIV OF ILL CHICAGO 2/	44,497	24,549	469	1,022	14,795	3,662
57 INDIANA UNIVERSITY	44,331	29,882	911	2,402	8,029	3,107
58 UNIV OF MISSOURI COLUMBIA	44,231	16,143	9,065	1,492	14,392	3,139
59 CARNEGIE-MELLON UNIV	43,174	30,546	739	7,922	414	3,553
60 CASE WESTERN RESERVE UNIV	42,691	34,963	190	1,720	2,209	3,609
TOTAL, 1ST 60 INSTS.	5,142,727	3,428,645	350,690	209,849	765,133	388,390
61 OKLAHOMA STATE UNIVERSITY	42,903I	11,544I	2,301I	2,283I	26,375I	0
62 WOODS HOLE OCNGRPHIC INST	42,070	35,997	62	1,126	1,476	3,409
63 NEW MEXICO STATE UNIV	41,579	30,750	4,846	0	583	5,400
64 COLORADO STATE UNIVERSITY	41,572	25,321	6,103	6,426	2,857	865
65 UNIVERSITY OF OKLAHOMA	40,987	14,206	447	2,260	23,440	634
66 UNIVERSITY OF KENTUCKY	40,829	13,786	12,448	3,007	11,588	0
67 VA POLYTECH INST & ST U	40,420	19,037	12,650	6,110	2,623	0
68 UNIV OF MD COLLEGE PARK	38,674E	31,094	3,637E	1,136E	2,807E	0
69 UNIVERSITY OF VIRGINIA	37,620	28,564	1,122	2,342	2,179	3,413
70 UNIV OF ALASKA FAIRBANKS	37,325	13,859	4,450	3,143	14,649	1,224
TOTAL, 1ST 70 INSTS.	5,546,306	3,652,823	398,756	237,682	853,710	403,335
71 UNIV OF CAL RIVERSIDE 1/	37,236	11,602	1,965	0	21,327	2,342E
72 PRINCETON UNIVERSITY	37,017	25,027	100	805	7,989	3,096
73 SUNY AT STONY BROOK	36,941	25,639	1,098	898	5,582	3,724
74 UTAH STATE UNIVERSITY	36,711	19,058	7,928	1,141	7,056	1,528
75 U TEX HLTH SCI CTR DALLAS	36,456	26,561	13	2,792	131	6,959
76 MISSISSIPPI STATE UNIV	35,714	7,775	766	1,229	24,618	1,326
77 KANS ST U - AG & APP SCI	35,130	10,268	14,704	1,120	6,757	2,281
78 WASHINGTON STATE UNIV	33,583	12,563	18,158	1,517	0	1,345
79 UNIVERSITY OF NEW MEXICO	33,356I	23,073I	3,468I	3,019I	2,550I	1,246I
80 UNIV OF CAL IRVINE 1/	33,293	27,484	602	0	2,108	3,099
TOTAL, 1ST 80 INSTS.	5,901,743	3,841,873	447,558	250,203	931,828	430,281
81 BOSTON UNIVERSITY	32,421	27,906	647	812	6	3,050
82 UNIV ALABAMA BIRMINGHAM	31,311	25,509	114	2,265	1,817	1,606
83 UNIV OF MASS AT AMHERST	29,696	17,072	3,224	2,018	6,422	960
84 UNIVERSITY OF CINCINNATI	29,008	20,074	74	1,262	3,400	4,198
85 CUNY MT SINAI SCH OF MED	28,561	20,587	137	1,145	2,132	4,560
86 VANDERBILT UNIVERSITY	26,322	19,8[illegible]	555	2,403	1,728	1,747
87 VIRGINIA COMMONWLTH UNIV	26,235	21,998E	216E	350E	1,774E	1,897E
88 AUBURN UNIVERSITY	26,176	8,083	9,879	1,904	1,557	4,753
89 UNIV OF RHODE ISLAND	24,766I	19,326I	5,440I	0	0	0
90 U TEX HLTH SCI CTR S ANTO	24,743	16,005	143	2,237	3,672	2,686
TOTAL, 1ST 90 INSTS.	6,180,982	4,038,322	467,987	264,599	954,336	455,738
91 TEMPLE UNIVERSITY	24,632	18,567	141	308	1,[illegible]95	4,021
92 EMORY UNIVERSITY	24,284	20,163	335	1,957	223	1,606
93 WAYNE STATE UNIVERSITY	23,990	12,713	369	894	6,207	3,807E
94 RENSSELAER POLYTECH INST	23,084	12,054	277	3,589	6,001	1,163
95 UNIV OF CAL SANTA BARBARA 1/	22,884	17,863	413	0	2,466	2,142E
96 BROWN UNIVERSITY	22,805	19,728	300	1,527	850	400
97 FLORIDA STATE UNIVERSITY	22,767	10,810	488	98	10,738	633
98 TULANE UNIVERSITY	22,440	11,221	313	2,410	4,864	3,632
99 ARIZONA STATE UNIVERSITY	22,294	10,288	3,970	1,373	5,796	867
100 UNIVERSITY OF KANSAS	22,111I	14,097I	5,018I	0	2,513I	483I
TOTAL, 1ST 100 INSTS.	6,412,273	4,185,826	479,611	276,755	995,589	474,492

SEE FOOTNOTES AT END OF TABLE.

TABLE B-30. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983

– CONTINUED

(DOLLARS IN THOUSANDS)

	INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
101	UNIV OF ARK FAYETTEVILLE	21,908	7,283	6,366	1,514	5,618	1,127
102	CLEMSON UNIVERSITY	21,766	7,822	8,661	2,223	2,421	639
103	GEORGE WASHINGTON UNIV	20,638	17,792	98	198	1,466	1,084
104	UNIVERSITY OF DAYTON	19,930	16,984	79	2,108	733	26
105	GEORGETOWN UNIVERSITY	19,885	11,630	148	1,234	2,926	3,947
106	UNIV OF MAINE ORONO	19,454	8,313	3,460	1,404	5,590	687
107	U TEX HLTH SCI CTR HOUSTN	19,362	14,410	842	707	739	2,664
108	UNIVERSITY OF DELAWARE	19,080	9,583	837	3,075	4,502	1,083
109	U TEX MED BRNCH GALVESTON	19,011	10,428	1,008	500	4,839	2,236
110	MONTANA STATE UNIVERSITY	18,896	6,309	5,723	1,054	5,810	0
	TOTAL, 1ST 110 INSTS.	6,612,203	4,296,380	506,833	290,772	1,030,233	487,985
111	UNIV OF MED & DENT OF N J	18,831	11,456	0	0	2,352	5,023
112	UNIV OF VT & ST AGRIC COL	18,805	12,850	1,325	1,665	2,216	749
113	UNIVERSITY OF DENVER	18,302I	13,143I	422I	2,132I	2,605I	0
114	SYRACUSE UNIVERSITY	17,565	9,904	256	943	3,106	3,356
115	UNIVERSITY OF IDAHO	17,453	11,496	1,881	2,260	1,144	672
116	NORTH DAKOTA STATE UNIV	17,269	3,924	11,690	377	1,264	14
117	DARTMOUTH COLLEGE	16,347	12,730	449	325	1,079	1,764
118	SUNY UPSTATE MEDICAL CTR	15,756	5,270	482	329	0	9,675
119	UNIV OF P R-MAYAGUEZ	15,733I	5,907I	6,726I	0	3,100	0
120	THOMAS JEFFERSON UNIV	15,580	6,068	0	4,290	5,222	0
	TOTAL, 1ST 120 INSTS.	6,783,844	4,389,128	530,064	303,093	1,052,321	509,238
121	OREGON HLTH SCIENCES UNIV	15,561	10,013	2	379	2,598	2,569
122	BRANDEIS UNIVERSITY	15,431	12,932	6	0	0	2,493
123	UNIVERSITY OF WYOMING	15,119	6,591	540	1,740	6,238	10
124	UNIV OF SOUTH CAROLINA	14,631	8,260	133	585	5,067	586
125	TEXAS TECH UNIVERSITY	14,597	5,662	5,352	1,910	737	936
126	UNIV OF MD BALT PROF SCH	14,594I	12,839I	0	120I	0	1,635I
127	LEHIGH UNIVERSITY	14,463	6,383	199	1,488	6,250	143
128	INST OF AGRI UNIV OF TENN	14,144	4,396	5,903	399	3,446E	0
129	UNIV OF NEVADA - RENO	13,969	6,000E	625	395E	3,000E	3,949
130	UNIV OF NEW HAMPSHIRE	13,954	7,546	1,510	248	3,202	1,448
	TOTAL, 1ST 130 INSTS.	6,970,307	4,469,750	544,334	310,357	1,082,859	523,007
131	TUFTS UNIVERSITY	13,914I	11,495I	0	315I	21I	2,083I
132	U TENNESSEE KNOXVILLE	13,807I	10,828I	597I	872I	1,510I	0
133	WEST VIRGINIA UNIVERSITY	13,704	7,196	836	513	4,509	650
134	MEDICAL COLLEGE OF WIS	13,453I	8,136I	0	792I	2,644I	1,881I
135	U OF HOUSTON UNIV PARK	13,102	7,002	355	1,239	2,148	2,358
136	SUNY DOWNSTATE MED CTR	13,072	9,100	423	284	584	2,681
137	UNIV OF CAL SANTA CRUZ 1/	12,867	8,303	263	0	1,588	713
138	UNIVERSITY OF NOTRE DAME	12,793	11,177	29	1,237	350	0
139	RUSH UNIVERSITY	12,122	7,137	0	753	2,300	1,932E
140	ST JOHN'S UNIVERSITY (NY)	12,000E	500E	25E	30E	11,745E	0
	TOTAL, 1ST 140 INSTS.	7,061,141	4,950,324	546,862	316,392	1,112,258	535,305
141	UNIVERSITY OF OREGON MAIN	11,985	9,031	335	30	2,300	289
142	ALBANY MEDICAL COLLEGE	11,823I	7,621I	1,152I	542I	0	2,508I
143	TENNESSEE STATE UNIV	11,798I	6,807I	1,859I	502I	1,654I	976I
144	HOWARD UNIVERSITY	10,959	8,671	28	23	1,231	1,006
145	UNIVERSITY OF MISSISSIPPI	10,687E	6,262E	183E	546	2,796E	900E
146	U MASS MED SCHL WORCESTER	10,645I	7,070I	169I	408I	2,165I	833I
147	SOUTHERN ILL U-CARBONDALE	10,474	4,163	3,792	2,519	0	0
148	SUNY AT ALBANY	10,442	7,418	307	63	2,053	601
149	RICE UNIVERSITY	10,612I	7,946I	0	597I	0	1,869I
150	MED UNIV OF SO CAROLINA	10,347	7,629	194	414	930	1,180
	TOTAL, 1ST 150 INSTS.	7,170,713	4,622,942	554,881	322,036	1,125,387	545,467

SEE FOOTNOTES AT END OF TABLE.

TABLE B-30. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
151 MICHIGAN TECH UNIVERSITY	10,012	3,568	1,700	1,453	3,206	5E
152 UNIV TENN CTR HEALTH SCI	9,999	7,188	309	892	0	1,573
153 US NAVAL POSTGRAD SCHOOL	9,761	9,700	0	61	0	0
154 U OF CAL SYS WIDE PROGRMS 1/	9,402	364	232	0	8,957	259
155 UNIVERSITY OF LOUISVILLE	8,669	4,294	707	322	2,745	601
156 N MEX INST MINING & TECH	8,344I	5,056I	83?I	879I	1,?73I	103I
157 NEW YORK MEDICAL COLLEGE	8,260	6,674	0	469	0	1,117
158 UNIV OF MISSOURI ROLLA	8,214	3,468	61	1,281	3,153	251
159 UNIVERSITY OF N DAKOTA	8,000	5,500	403E	696E	1,232E	169E
160 UNIV OF CENTRAL FLORIDA	7,980	2,974	1,437	1,032	2,528	9
TOTAL, 1ST 160 INSTS.	7,259,314	4,671,728	560,630	329,121	1,148,281	549,554
161 UNIV OF WIS-MILWAUKEE	7,851	3,383	3,315	262	573	318
162 SOUTH DAKOTA STATE UNIV	7,764	2,462	258I	465I	4,212I	267I
163 DESERT RESEARCH INSTITUTE	7,535	3,389	77	2,3?5	1,694	0
164 NORTHEASTERN UNIVERSITY	7,274I	5,629I	100I	562I	960I	23I
165 SAN DIEGO STATE UNIV	7,202	5,480	250	254	1,218	0
166 ST LOUIS UNIVERSITY	7,166	5,595	41I	0	733I	797I
167 WAKE FOREST UNIVERSITY	7,119I	5,640I	58I	133I	152I	1,136I
168 HAHNEMANN UNIVERSITY	7,031I	5,929I	67I	184I	376I	47II
169 UNIF SERV UNIV OF HLTH SC	6,997	6,997	0	0	0	0
170 MEDICAL COL OF GEORGIA	6,822	5,756	146	379	259	356
TOTAL, 1ST 170 INSTS.	7,332,075	4,721,988	564,942	333,835	1,158,388	552,922
171 SUNY COL OF ENV SCI & FOR	6,773I	1,896I	38I	703I	3,696I	440I
172 U OF NEB MED CTR AT OMAHA	6,728	3,489	323	498	1,690	728
173 UNIV OF TEXAS AT DALLAS	6,643	4,128	3	188	1,278	1,046
174 UNIV OF SOUTH FLORIDA	6,502	3,543	594	145	1,183	1,037
175 SUNY AT BINGHAMTON	6,441	3,438	660	556	1,455	332
176 MED COL OF OHIO AT TOLEDO	6,136I	4,288I	0	0	0	1,848I
177 WRIGHT STATE UNIVERSITY	6,086	3,035	79	573	1,331	1,068
178 DREXEL UNIVERSITY	5,896	4,291	441	611	553	0
179 SAN JOSE STATE UNIVERSITY	5,795I	3,951I	580I	877I	373I	14I
180 CUNY CITY COLLEGE	5,722	5,494	19	209	0	0
TOTAL, 1ST 180 INSTS.	7,394,797	4,759,541	567,679	338,195	1,169,947	559,435
181 NORTH TEXAS STATE UNIV	5,674	3,249	361	341	749	974
182 U OF ARKANSAS MED SCI CAN	5,407	3,950	0	232	550	675
183 COLORADO SCHOOL OF MINES	5,374	3,675	90	1,609	0	0
184 POLYTECHNIC INST OF N Y	5,276	4,113	324	0	0	839
185 BRIGHAM YOUNG UNIVERSITY	5,260	2,479	251	1,207	1,187	136
186 UNIV OF WEST FLORIDA	5,231	1,801	1,629	26	1,744	31
187 INSTITUTE PAPER CHEMISTRY	5,209	565	13	562	3,509	560
188 WESLEYAN UNIVERSITY	5,179E	3,760E	0	0	0	1,419E
189 BOSTON COLLEGE	5,127	4,871	75	45	0	136
190 OHIO UNIVERSITY	4,848	2,C??	321	111	2,251	153
TOTAL, 1ST 190 INSTS.	7,447,382	4,790,016	?70,743	342,328	1,179,937	564,358
191 LOYOLA UNIV - CHICAGO	4,775	3,793	128	661	586	607
192 ILLINOIS INST OF TECH	4,762	3,891	120	331	0	420
193 NC AG & TECH STATE UNIV	4,745	4,488	?57E	0	0	0E
194 STEVENS INSTITUTE OF TECH	4,686	2,905	1,8	0	1,483E	180
195 THE MEDICAL COL OF PENNA	4,377	3,371	?	1,006	0	0
196 UNIV OF P R-MED SCI CMPUS	4,323I	4,037I	84?	30I	127I	45I
197 NORTHERN ILLINOIS UNIV	4,271	1,643	773	386	1,469	0
198 PRAIRIE VIEW A & M UNIV	4,232I	3,768I	288I	0	0	176I
199 FLORIDA A & M UNIVERSITY	4,227I	1,241I	1,711I	288I	987I	0
200 WORCESTER POLY INSTITUTE	4,143	1,494	84	2,437	128	0
TOTAL, 1ST 200 INSTS.	7,491,923	4,819,647	574,3??	347,467	1,184,717	565,786
TOTAL, ALL OTHER INSTS.	253,031	139,956	24,735	22,701	46,062	19,577

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-31. — R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	4,968,764	2,850,287	546,308	229,520	983,288	359,361
1 UNIV OF WIS-MADISON	168,282	100,026	33,482	4,502	20,057	10,215
2 UNIVERSITY OF MINNESOTA	156,189	85,767	15,678	4,916	33,662	16,166E
3 UNIV OF CAL SAN DIEGO 1/	147,008	123,423	496	0	11,017	12,062
4 UNIVERSITY OF WASHINGTON	133,523	108,512	5,833	6,176	1,252	11,750
5 UNIVERSITY OF MICHIGAN	127,864	84,120	1,876	5,984	29,031	11,853
6 UNIV OF CAL BERKELEY 1/	118,951	76,917	3,325	0	31,158	7,551
7 UNIV OF CAL LOS ANGELES 1/	113,266	83,699	840	0	12,891	15,836
8 UNIV OF TEXAS AT AUSTIN	110,570	58,231	5,693	1,750	34,493	10,403
9 TEXAS A & M UNIVERSITY	103,219	43,813	41,055	6,483	3,106	8,762
10 UNIV OF ILL URBANA	99,135	59,806	5,282	3,448	27,372	3,227
TOTAL, 1ST 10 INSTS.	1,283,007	824,324	113,560	33,259	204,039	107,825
11 UNIV OF CAL DAVIS 1/	98,118	43,439	4,226	0	41,735	8,718
12 PENNSYLVANIA STATE UNIV	89,767	56,875	2,008	12,445	18,248	191
13 UNIV OF CAL SAN FRANCISCO 1/	89,247	67,035	1,185	0	7,557	13,470E
14 UNIVERSITY OF ARIZONA	89,192	44,741	18,237	7,956	13,782	4,476
15 GEORGIA INSTITUTE OF TECH	82,924	49,533	1,765	13,255	18,371	0
16 MICHIGAN STATE UNIVERSITY	79,043	43,067	14,601	619	18,334	2,422
17 UNIVERSITY OF COLORADO	75,798	55,028	1,642	1,542	8,957	8,629
18 PURDUE UNIVERSITY	75,510	42,147	9,545	9,749	11,956	2,593
19 OHIO STATE UNIVERSITY	74,146E	41,438E	9,206E	6,014E	8,003E	9,485E
20 UNIVERSITY OF FLORIDA	73,467	33,708	3,200	4,345	25,647	6,567
TOTAL, 1ST 20 INSTS.	2,110,219	1,301,335	179,175	88,704	376,629	164,376
21 UNIVERSITY OF GEORGIA	70,665	22,434	815	4,486	42,227	703
22 LOUISIANA STATE UNIV	68,383	18,044	27,575	1,834	17,215	3,715
23 IOWA ST U OF SCI & TECH	64,861	21,050	17,242	2,957	20,778	2,834
24 OREGON STATE UNIVERSITY	62,723	35,530	14,052	3,424	2,203	7,514
25 N C STATE UNIV AT RALEIGH	59,909	23,286	28,442	3,246	4,502	433
26 UNIVERSITY OF CONNECTICUT	58,902	34,960	1,344	1,743	11,155	9,700
27 UNIVERSITY OF IOWA	54,771	40,460	338	1,490	10,363	2,120
28 UNIV OF NC AT CHAPEL HILL	50,892	43,384	2,434	594	2,990	1,490
29 SUNY AT BUFFALO	50,129	38,415	430	0	8,798	2,486
30 RUTGERS THE ST UNIV OF NJ	49,729	18,894	7,585	1,694	19,373	2,183
TOTAL, 1ST 30 INSTS.	2,701,183	1,597,792	279,432	110,172	516,233	197,554
31 UNIVERSITY OF PITTSBURGH	47,313	36,334	217	2,919	3,284	4,559
32 UNIVERSITY OF UTAH	46,830	37,981	877	1,888	3,251	2,833
33 UNIV OF HAWAII-MANOA	45,401	27,633	15,441	723	1,159	445
34 UNIV OF NEBRASKA-LINCOLN	44,597	12,750	1,710	1,203	26,616	2,318
35 U TEXAS SYSTEM CANCER CTR	44,509	15,112	0	0	20,894	8,503
36 UNIV OF ILL CHICAGO 2/	44,497	24,549	469	1,022	14,795	3,662
37 INDIANA UNIVERSITY	44,331	29,882	911	2,402	8,029	3,107
38 UNIV OF MISSOURI COLUMBIA	44,231	16,143	9,065	1,492	14,392	3,139
39 OKLAHOMA STATE UNIVERSITY	42,503I	11,544I	2,301I	2,283I	26,375I	0
40 NEW MEXICO STATE UNIV	41,579	30,750	4,846	0	583	5,400
TOTAL, 1ST 40 INSTS.	3,146,974	1,840,470	315,269	124,104	635,611	231,520
41 COLORADO STATE UNIVERSITY	41,572	25,221	6,103	6,426	2,857	865
42 UNIVERSITY OF OKLAHOMA	40,987	14,206	447	2,260	23,440	634
43 UNIVERSITY OF KENTUCKY	40,829	13,786	12,448	3,007	11,588	0
44 VA POLYTECH INST & ST U	40,420	19,037	12,650	6,110	2,623	0
45 UNIV OF MD COLLEGE PARK	38,674E	31,094	3,637E	1,136E	2,807E	0
46 UNIVERSITY OF VIRGINIA	37,620	28,564	1,122	2,342	2,179	3,413
47 UNIV OF ALASKA FAIRBANKS	37,325	13,859	4,450	3,143	14,649	1,224
48 UNIV OF CAL RIVERSIDE 1/	37,236	11,602	1,965	0	21,327	2,342E
49 SUNY AT STONY BROOK	36,941	25,639	1,098	898	5,582	3,724
50 UTAH STATE UNIVERSITY	36,711	19,058	7,928	1,141	7,056	1,528
TOTAL, 1ST 50 INSTS.	3,535,289	2,042,636	367,117	150,567	729,719	245,250

SEE FOOTNOTES AT END OF TABLE.

TABLE B-31. — R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983
- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 U TEX HLTH SCI CTR DALLAS	36,456	26,561	13	2,792	131	6,959
52 MISSISSIPPI STATE UNIV	35,714	3,775	766	1,229	24,618	1,326
53 KANS ST U - AG & APP SCI	35,130	10,268	14,704	1,120	6,757	2,281
54 WASHINGTON STATE UNIV	33,583	12,563	18,158	1,517	0	1,345
55 UNIVERSITY OF NEW MEXICO	33,356I	23,073I	3,468I	3,019I	2,550I	1,246I
56 UNIV OF CAL IRVINE 1/	33,293	27,484	602	0	2,108	3,099
57 UNIV ALABAMA BIRMINGHAM	31,311	25,929	114	2,265	1,817	1,606
58 UNIV OF MASS AT AMHERST	29,696	17,672	3,224	2,018	6,422	960
59 UNIVERSITY OF CINCINNATI	29,008	20,074	74	1,262	3,400	4,198
60 VIRGINIA COMMONWLTH UNIV	26,235	21,998E	216E	350E	1,774E	1,897E
TOTAL, 1ST 60 INSTS.	3,859,071	2,235,013	408,456	166,139	779,296	270,167
61 AUBURN UNIVERSITY	26,176	8,083	9,879	1,904	1,957	4,753
62 UNIV OF RHODE ISLAND	24,766I	19,326I	5,440I	0	0	0
63 U TEX HLTH SCI CTR S ANTO	24,743	16,005	143	2,237	3,672	2,686
64 TEMPLE UNIVERSITY	24,632	18,567	141	308	1,595	4,021
65 WAYNE STATE UNIVERSITY	23,990	12,713	369	894	6,207	3,807E
66 UNIV OF CAL SANTA BARBARA 1/	22,884	17,863	413	0	2,466	2,142E
67 FLORIDA STATE UNIVERSITY	22,767	10,810	488	98	10,738	633
68 ARIZONA STATE UNIVERSITY	22,294	10,788	3,970	1,373	5,796	867
69 UNIVERSITY OF KANSAS	22,111I	14,097I	5,018I	0	2,513I	483I
70 UNIV OF ARK FAYETTEVILLE	21,908	7,283	6,366	1,514	5,618	1,127
TOTAL, 1ST 70 INSTS.	4,095,342	2,370,048	440,683	174,467	819,458	290,686
71 CLEMSON UNIVERSITY	21,766	7,822	8,661	2,223	2,421	639
72 UNIV OF MAINE ORONO	19,454	8,313	3,460	1,404	5,590	687
73 U TEX HLTH SCI CTR HOUSTN	19,362	14,410	842	707	739	2,664
74 UNIVERSITY OF DELAWARE	19,080	9,583	837	3,075	4,502	1,083
75 U TEX MED BRNCH GALVESTON	19,011	10,428	1,008	500	4,839	2,236
76 MONTANA STATE UNIVERSITY	18,896	6,309	5,723	1,054	5,810	0
77 UNIV OF MED & DENT OF N J	18,631	11,456	0	0	2,352	5,023
78 UNIV OF VT & ST AGRIC COL	18,805	12,850	1,325	1,665	2,216	749
79 UNIVERSITY OF IDAHO	17,453	11,496	1,881	2,260	1,144	672
80 NORTH DAKOTA STATE UNIV	17,269	3,924	11,690	377	1,264	14
TOTAL, 1ST 80 INSTS.	4,285,269	2,466,639	476,110	187,732	850,335	304,453
81 SUNY UPSTATE MEDICAL CTR	15,756	5,270	482	329	0	9,675
82 UNIV OF P R-MAYAGUEZ	15,733I	5,907I	6,726I	0	3,100I	0
83 OREGON HLTH SCIENCES UNIV	15,561	10,013	2	379	2,598	2,569
84 UNIVERSITY OF WYOMING	15,119	6,591	540	1,740	6,238	10
85 UNIV OF SOUTH CAROLINA	14,631	8,260	133	585	5,067	586
86 TEXAS TECH UNIVERSITY	14,597	5,662	5,352	1,910	737	936
87 UNIV OF MD BALT PROF SCH	14,594I	12,839I	0	120I	0	1,635I
88 INST OF AGRI UNIV OF TENN	14,144	4,396	5,903	399	3,446E	0
89 UNIV OF NEVADA - RENO	13,969	6,000E	625	395E	3,000E	3,949
90 UNIV OF NEW HAMPSHIRE	13,954	7,546	1,510	248	3,202	1,448
TOTAL, 1ST 90 INSTS.	4,433,327	2,539,123	497,383	193,837	877,723	325,261
91 U TENNESSEE KNOXVILLE	13,807I	10,828I	597I	872I	1,510I	0
92 WEST VIRGINIA UNIVERSITY	13,704	7,196	836	513	4,509	650
93 U OF HOUSTON UNIV PARK	13,102	7,002	355	1,239	2,148	2,358
94 SUNY DOWNSTATE MED CTR	13,072	9,100	423	284	584	2,681
95 UNIV OF CAL SANTA CRUZ 1/	12,867	8,303	263	0	3,588	713
96 UNIVERSITY OF OREGON MAIN	11,985	9,031	335	30	2,300	289
97 TENNESSEE STATE UNIV	11,798I	6,807I	1,859I	502I	1,654I	976I
98 UNIVERSITY OF MISSISSIPPI	10,687E	6,262E	183E	546	2,796E	900E
99 U MASS MED SCHL WORCESTER	10,644I	7,070I	169I	408I	2,165I	833I
100 SOUTHERN ILL U-CARBONDALE	10,474	4,163	3,792	2,519	0	0
TOTAL, 1ST 100 INSTS.	4,555,468	2,614,885	506,195	200,750	898,977	334,661
TOTAL, ALL OTHER INSTS.	413,296	235,402	40,113	33,770	8,311	24,700

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-32. — R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
TOTAL, ALL INSTITUTIONS	2,776,190	2,109,316	52,733	140,648	247,491	226,002
1 JOHNS HOPKINS UNIVERSITY	[illegible]	282,386E	2,730E	207E	5,021E	12,771E
2 MASS INST OF TECHNOLOGY	200,349	[illegible].801	802	17,944	1,532	17,270
3 STANFORD UNIVERSITY	163,031	135,1[illegible]	424	6,[illegible]	11,421	[illegible]584
4 CORNELL UNIVERSITY	153,323	90,185	29,586	9,206	17,547	11,799
5 HARVARD UNIVERSITY	118,602E	89,824	330E	4,695E	7,506E	16,247E
6 COLUMBIA UNIV MAIN DIV	113,847	100,574	54	326	1,800	11,083
7 UNIV OF PENNSYLVANIA	113,499	80,516	606	1,821	12,617	17,939
8 YALE UNIVERSITY	100,269	85,205	2,787	1,316	9,659	1,302
9 UNIV OF SOUTHERN CAL	84,395	57,976	3,400	2,012	17,242	3,765
10 UNIVERSITY OF CHICAGO	77,314	61,[illegible]	1,067	941	6,818	4,503
TOTAL, 1ST 10 INSTS.	1,425,744	1,146,624	36,786	44,908	91,163	106,263
11 WASHINGTON UNIVERSITY	69,357	54,350	360	5,601	4,400	4,646
12 NEW YORK UNIVERSITY	68,544	49,840	323	2,649	7,440	8,272
13 UNIVERSITY OF ROCHESTER	65,305	48,744	1,700	6,481	2,624	5,754
14 DUKE UNIVERSITY	55,040	46,808	432	3,166	2,016	2,618
15 BAYLOR COL OF MEDICINE	54,286	36,772	92	4,726	6,625	6,771
16 YESHIVA UNIVERSITY	53,812	46,102	0	0	4,042	3,668
17 ROCKEFELLER UNIVERSITY	52,000	23,625	181	2,661	18,775	6,758
18 NORTHWESTERN UNIVERSITY	51,075	36,519	244	1,365	7,577	5,470
19 CALIFORNIA INST OF TECH	49,824	43,340	780	2,445	510	2,749
20 UNIVERSITY OF MIAMI	48,283	32,236	341	4,384	8,685	2,137
TOTAL, 1ST 20 INSTS.	1,993,970	1,564,980	41,639	78,386	153,877	155,108
21 CARNEGIE-MELLON UNIV	43,174	30,546	739	7,922	414	3,553
22 CASE WESTERN RESERVE UNIV	42,691	34,963	190	1,720	2,209	3,609
23 WOODS HOLE OCNGRPHIC INST	42,070	38,997	62	1,126	1,476	3,409
24 PRINCETON UNIVERSITY	37,017	25,027	100	805	7,989	3,096
25 BOSTON UNIVERSITY	32,421	27,906	647	812	6	3,050
26 CUNY MT SINAI SCH OF MED	28,561	20,587	137	1,145	2,132	4,560
27 VANDERBILT UNIVERSITY	26,322	19,889	555	2,403	1,728	1,747
28 EMORY UNIVERSITY	24,284	20,163	335	1,957	223	1,606
29 RENSSELAER POLYTECH INST	23,084	12,054	277	3,589	6,001	1,163
30 BROWN UNIVERSITY	22,805	19,728	300	1,527	850	400
TOTAL, 1ST 30 INSTS.	2,316,399	1,811,840	44,981	101,392	176,885	181,301
31 TULANE UNIVERSITY	22,440	11,221	313	2,410	4,864	3,632
32 GEORGE WASHINGTON UNIV	20,638	17,792	98	198	1,466	1,084
33 UNIVERSITY OF DAYTON	19,930	16,984	79	2,108	733	26
34 GEORGETOWN UNIVERSITY	19,885	11,630	148	1,234	2,926	3,947
35 UNIVERSITY OF DENVER	18,302I	13,143I	422I	2,132I	2,605I	0
36 SYRACUSE UNIVERSITY	17,565	9,904	256	943	3,106	3,356
37 DARTMOUTH COLLEGE	16,347	12,730	449	325	1,079	1,764
38 THOMAS JEFFERSON UNIV	15,580	6,068	0	4,290	5,222	0
39 BRANDEIS UNIVERSITY	15,431	12,932	6	0	0	2,493
40 LEHIGH UNIVERSITY	14,463	6,383	199	1,488	6,250	143
TOTAL, 1ST 40 INSTS.	2,496,980	1,930,627	46,951	116,520	205,136	197,746
41 TUFTS UNIVERSITY	13,914I	11,495I	0	315I	21I	2,083I
42 MEDICAL COLLEGE OF WIS	13,453I	8,136I	0	792I	2,644I	1,881I
43 UNIVERSITY OF NOTRE DAME	12,793	11,177	29	1,237	350	0
44 RUSH UNIVERSITY	12,122	7,137	0	753	2,300	1,932E
45 ST JOHN'S UNIVERSITY (NY)	12,000E	200E	25E	30E	11,745E	0
46 ALBANY MEDICAL COLLEGE	11,823I	7,621I	1,152I	542I	0	2,508I
47 HOWARD UNIVERSITY	10,959	8,671	28	23	1,231	1,006
48 RICE UNIVERSITY	10,412I	7,946I	0	597I	0	1,869I
49 NEW YORK MEDICAL COLLEGE	8,260	6,674	0	469	0	1,117
50 NORTHEASTERN UNIVERSITY	7,274I	5,629I	100I	562I	960I	23I
TOTAL, 1ST 50 INSTS.	2,609,990	2,005,313	48,285	121,840	224,387	210,165

SEE FOOTNOTES AT END OF TABLE.

TABLE B-32. — R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SOURCE OF FUNDS: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	FEDERAL GOVT.	STATE & LOCAL GOVTS.	INDUSTRY	INSTITUTIONAL FUNDS	OTHER
51 ST LOUIS UNIVERSITY	7,166	5,595	411	0	733I	797I
52 WAKE FOREST UNIVERSITY	7,119I	5,640I	58I	133I	152I	1,136I
53 HAHNEMANN UNIVERSITY	7,031I	5,929I	67I	188I	376I	471I
54 DREXEL UNIVERSITY	5,896	4,291	441	611	553	0
55 POLYTECHNIC INST OF N Y	5,276	4,113	324	0	0	839
56 BRIGHAM YOUNG UNIVERSITY	5,260	2,479	251	1,207	1,187	136
57 INSTITUTE PAPER CHEMISTRY	5,209	565	13	562	3,509	560
58 WESLEYAN UNIVERSITY	5,179E	3,760E	0	0	0	1,419E
59 BOSTON COLLEGE	5,127	4,871	75	45	0	136
60 LOYOLA UNIV - CHICAGO	4,775	2,793	128	661	586	607
TOTAL, 1ST 60 INSTS.	2,668,028	2,045,349	49,683	125,247	231,483	216,266
61 ILLINOIS INST OF TECH	4,762	3,891	120	331	0	420
62 STEVENS INSTITUTE OF TECH	4,686	2,905	118	0	1,483E	180
63 THE MEDICAL COL OF PENNA	4,377	3,371	0	1,006	0	0
64 WORCESTER POLY INSTITUTE	4,143	1,494	84	2,437	128	0
65 CLARKSON COLLEGE OF TECH	4,015	2,769	11	755	480	0
66 OREGON GRADUATE CENTER	3,218I	2,014I	96I	1,108I	0	0
67 U HLTH SCI/CHCGO MED SCH	3,006I	1,294I	14I	8I	1,490I	260I
68 CATHOLIC UNIV OF AMERICA	2,899	2,899	0	0	0	0
69 SOUTHERN METHODIST UNIV	2,822	1,454	660	110	352	246
70 NEW YORK INST TECHNOLOGY	2,737	228	0	718	1,791	0
TOTAL, 1ST 70 INSTS.	2,704,693	2,067,668	50,786	131,720	237,147	217,372
71 CATHOLIC UNIV OF P R	2,731	551	0	0	2,180	0
72 LOMA LINDA UNIVERSITY	2,623I	1,961I	38I	17I	17I	590I
73 CLARK UNIVERSITY	2,575I	2,008I	30I	0	319I	218I
74 TEXAS COL OF OSTEO MED	2,410	1,620	0	66	571	153
75 CREIGHTON UNIVERSITY	2,316	892	2	886	536	0
76 GALLAUDET COLLEGE	2,235	2,115	120	0	0	0
77 ATLANTA UNIVERSITY	2,195	1,995E	0	39	68	93E
78 MEHARRY MEDICAL COLLEGE	2,157	1,803	260	0	0	94
79 TEXAS CHRISTIAN UNIV	1,773	642	239	550	76	266
80 WELLESLEY COLLEGE	1,643	844	0	0	0	799
TOTAL, 1ST 80 INSTS.	2,727,351	2,082,099	51,475	133,278	240,914	219,585
81 FLORIDA INST OF TECH	1,520	604	209	[illegible]	296	376
82 FAIRLEIGH DICKINSON UNIV	1,514	768	162	402	0	182
83 UNIVERSITY OF TULSA	1,434	702	0	702	30	0
84 MARQUETTE UNIVERSITY	1,379	1,006	0	256	117	0
85 WENTWORTH INST OF TECH	1,327	1,327	0	0	0	0
86 OCCIDENTAL COLLEGE	1,278	182	0	1,030	54	12
87 SMITH COLLEGE	1,265	231	0	101	272	661
88 THE WRIGHT INSTITUTE	1,236I	837I	0	0	59I	340I
89 FORDHAM UNIVERSITY	1,211	1,043	0	23	0	145
90 NE OHIO UNIVS MED SCHOOL	1,204	568	1	0	420	215
TOTAL, 1ST 90 INSTS.	2,740,719	2,089,367	51,847	135,827	242,162	221,516
91 MANHATTAN COLLEGE	1,133	972	0	0	153	8
92 ALFRED UNIVERSITY	1,088	184	32	579	293E	0
93 INSTITUTE OF TEXTILE TECH	1,039I	0I	0	1,039I	0	0
94 AMERICAN UNIVERSITY	1,028	760	0	0	96	172
95 CHICAGO COL OF OSTEO MED	1,010	196	0	98	716	0
96 TUSKEGEE INSTITUTE	998E	998E	0	0	0	0
97 CLAREMONT GRADUATE SCHOOL	984I	414I	107I	0	422I	41I
98 UNIVERSITY OF SANTA CLARA	961	855	5	101	0	0
99 POMONA COLLEGE	959I	912I	0	0	0	47I
100 HARVEY MUDD COLLEGE	950	225	0	696	29	0
TOTAL, 1ST 100 INSTS.	2,750,869	2,094,883	51,991	138,340	243,871	221,784
TOTAL, ALL OTHER INSTS.	25,321	14,433	742	2,308	3,620	4,218

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-33. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	7,744,954	1,100,902	890,026	618,126	278,238	4,209,679	137,170	345,512	165,301
1 JOHNS HOPKINS UNIVERSITY	303,115E	81,360E	57,314E	31,051E	49,339E	73,637E	903E	4,214E	5,297E
2 MASS INST OF TECHNOLOGY	200,349	82,467	56,726	11,269	10,368	26,489	4,269	6,034	2,727
3 UNIV OF WIS-MADISON	168,282	17,613	15,594	13,261	6,999	95,128	6,539	10,309	2,839
4 STANFORD UNIVERSITY	163,031	50,218	25,679	3,080	10,639	68,475	2,612	2,328	0
5 UNIVERSITY OF MINNESOTA	156,189	13,957	10,666	3,334	2,338	117,513	3,788	3,098	1,495
6 CORNELL UNIVERSITY	153,322	23,141E	24,562E	4,631	2,702	89,264E	1,880E	6,879E	264
7 UNIV OF CAL SAN DIEGO 1/	147,008	885	17,399	78,831	2,259	44,106	2,240	1,288	0
8 UNIVERSITY OF WASHINGTON	133,523	8,203	7,701	16,697	2,383	79,340	2,155	2,610	14,434
9 UNIVERSITY OF MICHIGAN	132,864	19,817	9,524	6,404	3,047	62,243	9,088	22,058	683
10 UNIV OF CAL BERKELEY 1/	118,951	25,208	21,570	2,509	3,000	50,186	4,253	11,048	1,177
TOTAL, 1ST 10 INSTS.	1,676,635	322,869	246,735	171,067	93,074	706,381	37,727	69,866	28,916
11 HARVARD UNIVERSITY	118,602E	1,369E	16,430E	6,177E	2,341E	85,549E	1,168E	4,954E	1,014E
12 COLUMBIA UNIV MAIN DIV	113,847	6,942	11,561	21,114	2,542	65,645	562	5,481	0
13 UNIV OF PENNSYLVANIA	113,499	6,337	11,036	1,718	2,758	73,808	1,127	13,136	3,579
14 UNIV OF CAL LOS ANGELES 1/	113,266	14,733	11,822	7,003	933	69,678	3,262	6,435	0
15 UNIV OF TEXAS AT AUSTIN	110,570	14,950	23,961	16,817	4,699	11,422	1,316	10,979	26,426
16 TEXAS A & M UNIVERSITY	103,219	30,719	6,071	6,332	527	57,346	1,001	1,223	0
17 YALE UNIVERSITY	100,269	3,686	10,217	1,096	3,864	75,944	1,949	3,513	0
18 UNIV OF ILL URBANA	99,135	25,729	14,993	9,556	6,731	28,212	3,083	8,632	2,199
19 UNIV OF CAL DAVIS 1/	98,118	2,822	2,935	379	171	91,394	216	201	0
20 PENNSYLVANIA STATE UNIV	89,767	32,989	6,858	7,667	6,136	30,772	368	2,811	2,166
TOTAL, 1ST 20 INSTS.	2,736,927	463,145	362,619	248,936	123,776	1,295,551	51,779	126,831	64,300
21 UNIV OF CAL SAN FRANCISCO 1/	89,247	0	0	0	0	89,247	0	0	0
22 UNIVERSITY OF ARIZONA	89,192	6,287	20,212	12,148	984	42,105	863	5,402	191
23 UNIV OF SOUTHERN CAL	84,395	25,106	4,471	6,345	3,615	39,578	2,189	3,091	0
24 GEORGIA INSTITUTE OF TECH	82,924	59,876	6,050	4,203	6,980	1,232	800	2,450	1,333
25 MICHIGAN STATE UNIVERSITY	79,043	2,964	13,573	1,014	949	56,487	1,014	3,042	0
26 UNIVERSITY OF COLORADO	75,798	3,813	11,935	8,664	697	45,619	1,851	3,219	0
27 PURDUE UNIVERSITY	75,510	22,403	8,100	970	2,143	36,077	1,038	4,006	773
28 UNIVERSITY OF CHICAGO	75,314	0	19,334E	2,501E	934E	49,414E	992E	2,139E	0
29 OHIO STATE UNIVERSITY	74,146E	15,208E	5,842E	1,546E	1,647E	36,810E	432E	2,181E	10,480E
30 UNIVERSITY OF FLORIDA	73,467	14,544	5,377	2,347	1,064	46,286	1,006	1,163	1,680
TOTAL, 1ST 30 INSTS.	3,535,963	613,346	457,513	309,664	142,789	1,738,406	61,964	153,524	78,757
31 UNIVERSITY OF GEORGIA	70,665	2,320	1,895	2,404	2,787	51,228	754	9,077	0
32 WASHINGTON UNIVERSITY	69,357	2,682	3,303	1,269	3,908	57,342	568	289	0
33 NEW YORK UNIVERSITY	68,544	0	2,978	358	6,853	53,756	1,160	1,817	1,722
34 LOUISIANA STATE UNIV	68,383	6,276	4,097	5,451	2,029	47,518	164	2,638	0
35 UNIVERSITY OF ROCHESTER	65,305	10,240	7,602	115	1,326	43,248	2,022	373	381
36 IOWA ST U OF SCI & TECH	64,861	12,402	2,439	574	5,100	36,660	306	3,003	4,377
37 OREGON STATE UNIVERSITY	62,723	3,564	1,734	16,842	695	37,808	0	1,664	416
38 N C STATE UNIV AT RALEIGH	59,909	13,812	3,537	3,294	1,579	36,768	381	538	0
39 UNIVERSITY OF CONNECTICUT	58,902	6,500	5,334	1,512	718	39,914	3,394	1,530	0
40 DUKE UNIVERSITY	55,040	1,552	3,826	2,395	685	45,335	324	923	0
TOTAL, 1ST 40 INSTS.	4,179,652	672,694	494,258	324,182	168,469	2,187,983	71,037	175,376	85,653
41 BAYLOR COL OF MEDICINE	54,986	0	0	0	0	54,986	0	0	0
42 UNIVERSITY OF IOWA	54,771	4,763	7,629	201	1,049	38,969	840	1,320	0
43 YESHIVA UNIVERSITY	53,812	0	0	0	260	53,297	0	255	0
44 ROCKEFELLER UNIVERSITY	52,000	0	2,875	0	726	44,291	4,108	0	0
45 NORTHWESTERN UNIVERSITY	51,075	7,797	5,333	594	454	29,203	835	325	6,534
46 UNIV OF NC AT CHAPEL HILL	50,892	0	3,047	3,482	1,388	36,806	2,700	3,469	0
47 SUNY AT BUFFALO	50,129	3,093	3,253	707	700	41,207	316	561	292
48 CALIFORNIA INST OF TECH	49,824	10,075	21,027	7,339	2,116	8,460	0	519	288
49 RUTGERS THE ST UNIV OF NJ	49,729	4,090	5,797	3,630	3,322	21,546	3,451	4,854	3,039
50 UNIVERSITY OF MIAMI	48,283	931	418	14,301	397	31,196	237	270	533
TOTAL, 1ST 50 INSTS.	4,695,153	703,443	543,637	354,436	178,881	2,547,944	83,524	186,949	96,339

SEE FOOTNOTES AT END OF TABLE.

TABLE B-33. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIVERSITY OF PITTSBURGH	47,313	3,198	6,972	191	1,428	33,229	409	809	1,077
52 UNIVERSITY OF UTAH	46,830	7,931	5,476	2,161	2,516	28,053	206	487	0
53 UNIV OF HAWAII-MANOA	45,401	1,561E	9,432E	12,861E	137E	15,020E	0	1,525E	4,865E
54 UNIV OF NEBRASKA-LINCOLN	44,597	3,278E	4,789E	5,351E	451E	28,051E	396E	1,794E	487E
55 U TEXAS SYSTEM CANCER CTR	44,509	0	2,074	0	2,203	40,232	0	0	0
56 UNIV OF ILL CHICAGO 2/	44,497	3,228	4,395	550	609	27,083	351	2,062	6,219
57 INDIANA UNIVERSITY	44,331	84	12,706	471	905	24,536	2,019	1,594	2,016
58 UNIV OF MISSOURI COLUMBIA	44,231	2,888	1,180	1,358	252	34,471	592	3,459	31
59 CARNEGIE-MELLON UNIV	43,174	10,086	4,215	1,456	15,745	6,086	1,192	2,595	1,799
60 CASE WESTERN RESERVE UNIV	42,691	10,865	3,604	349	110	27,131	243	389	0
TOTAL, 1ST 60 INSTS.	5,142,727	746,562	598,480	379,184	203,237	2,811,836	88,932	201,663	112,833
61 OKLAHOMA STATE UNIVERSITY	42,503I	8,733I	1,800I	588I	140I	26,103I	18I	3,149I	1,972I
62 WOODS HOLE OCNGRPHIC INST	42,070	5,445	0	36,625	0	0	0	0	0
63 NEW MEXICO STATE UNIV	41,579	18,829	787	2,215	10,270	8,679	333	465	1
64 COLORADO STATE UNIVERSITY	41,572	8,229	3,065	4,066	689	21,527	53	3,066	877
65 UNIVERSITY OF OKLAHOMA	40,987	7,269	5,049	5,735	3,812	14,829	659	3,453	181
66 UNIVERSITY OF KENTUCKY	40,829	8,574	661	704	240	30,318	0	332	0
67 VA POLYTECH INST & ST U	40,420	12,241	3,436	1,583	684	21,012	281	1,183	0
68 UNIV OF MD COLLEGE PARK	38,674E	5,908E	19,519E	2,812E	3,233E	5,367E	535E	1,300E	0
69 UNIVERSITY OF VIRGINIA	37,620	6,554	3,989	2,928	857	21,401	376	1,317	198
70 UNIV OF ALASKA FAIRBANKS	37,325	1,923	0	20,594	234	10,700	0	2,387	1,485
TOTAL, 1ST 70 INSTS.	5,546,306	830,267	636,786	457,034	223,398	2,971,772	91,187	218,315	117,547
71 UNIV OF CAL RIVERSIDE 1/	37,236	0	3,259	904	320	31,942	355	456	0
72 PRINCETON UNIVERSITY	37,017	8,413	10,315	4,467	2,763	5,009	1,374	4,676	0
73 SUNY AT STONY BROOK	36,941	2,590	7,857	4,652	1,190	18,741	1,025	494	392
74 UTAH STATE UNIVERSITY	36,711	1,950	2,172	15,544	77	13,585	133	1,081	2,169
75 U TEX HLTH SCI CTR DALLAS	36,456	0	0	0	0	36,456	0	0	0
76 MISSISSIPPI STATE UNIV	35,714	3,852	541	490	1	28,799	0	1,508	523
77 KANS ST U - AG & APP SCI	35,130	3,097	1,173	205	236	21,807	17	653	7,942
78 WASHINGTON STATE UNIV	33,583	3,160	1,610	198	350	26,200	42	714E	1,309E
79 UNIVERSITY OF NEW MEXICO	33,356I	8,982I	2,011I	1,134I	605I	16,546I	214I	3,864I	0
80 UNIV OF CAL IRVINE 1/	33,293	1,356	7,227	30	578	23,724	0	378	0
TOTAL, 1ST 80 INSTS.	5,901,743	863,667	672,951	484,658	229,518	3,194,581	94,347	232,139	129,882
81 BOSTON UNIVERSITY	32,421	327	2,190	44	477	26,222	345	584	2,232
82 UNIV ALABAMA BIRMINGHAM	31,311	115	61	0	183	30,952	0	0	0
83 UNIV OF MASS AT AMHERST	29,696	3,321	8,915	2,678	2,323	10,182	1,116	1,161	0
84 UNIVERSITY OF CINCINNATI	29,008	3,218	1,249	170	100	23,341	13	93	824
85 CUNY MT SINAI SCH OF MED	28,561	0	0	0	0	28,561	0	0	0
86 VANDERBILT UNIVERSITY	26,322	1,363	1,588	86	162	20,398	1,408	1,317	0
87 VIRGINIA COMMONWLTH UNIV	26,235	0	672I	0	231	24,808I	189I	543I	0
88 AUBURN UNIVERSITY	26,176	4,174	725	0	33	21,244	0	0	0
89 UNIV OF RHODE ISLAND	24,766I	4,396I	474I	16,257I	0	2,911I	0	728I	0
90 U TEX HLTH SCI CTR S ANTO	24,743	0	0	0	0	24,743	0	0	0
TOTAL, 1ST 90 INSTS.	6,180,982	880,581	688,825	503,893	232,819	3,407,943	97,418	236,565	132,938
91 TEMPLE UNIVERSITY	24,632	0	1,027	260	191	19,784	185	3,185	0
92 EMORY UNIVERSITY	24,284	0	1,492	0	102	22,244	379	67	0
93 WAYNE STATE UNIVERSITY	23,990	2,345	3,253	29	222	15,658	267	1,421	795
94 RENSSELAER POLYTECH INST	23,084	17,329	3,265	353	813	658	43	55	568
95 UNIV OF CAL SANTA BARBARA 1/	22,884	1,969	8,912	4,729	1,274	1,710	1,557	2,733	0
96 BROWN UNIVERSITY	22,805	4,457	3,488	2,605	2,736	8,142	563	814	0
97 FLORIDA STATE UNIVERSITY	22,767	0	5,729	4,888	2,950	5,469	1,561	1,833	337
98 TULANE UNIVERSITY	22,440	625	222	2	174	20,914	9	494	0
99 ARIZONA STATE UNIVERSITY	22,294	7,142	5,586	2,408	380	1,925	640	2,599	1,614
100 UNIVERSITY OF KANSAS	22,111I	2,220I	1,561I	3,128I	218I	8,045I	5,148I	1,431I	360I
TOTAL, 1ST 100 INSTS.	6,412,273	916,668	723,360	522,295	241,879	3,512,492	107,770	251,197	136,612

SEE FOOTNOTES AT END OF TABLE.

TABLE B-33. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
101 UNIV OF ARK FAYETTEVILLE	21,908	2,880	1,907	265	454	14,762	127	1,213	300
102 CLEMSON UNIVERSITY	21,764	4,138	820	0	722	15,436	28	515	107
103 GEORGE WASHINGTON UNIV	20,638	4,371	229	51	2,447	10,344	[illegible]	1,488	1,543
104 UNIVERSITY OF DAYTON	19,930	12,728	3,291	289	984	97	1,815	17	709E
105 GEORGETOWN UNIVERSITY	19,885	0	1,058	0	0	14,651	0	390	3,786
106 UNIV OF MAINE ORONO	19,454	2,865	920	4,341	425	7,922	428	1,566	987
107 U TEX HLTH SCI CTR HOUSTN	19,362	0	0	626	0	18,028	0	708	0
108 UNIVERSITY OF DELAWARE	19,080	4,814E	2,236	3,575	514	4,588	218	700	2,435
109 U TEX MED BRNCH GALVESTON	19,011	0	0	0	0	19,011	0	0	0
110 MONTANA STATE UNIVERSITY	18,896	1,894	1,712	89	148	14,169	33	851	0
TOTAL, 1ST 110 INSTS.	6,612,203	950,358	735,533	531,531	247,573	3,631,500	110,584	258,645	146,479
111 UNIV OF MED & DENT OF N J	18,831	0	0	0	0	18,831I	0	0	0
112 UNIV OF VT & ST AGRIC COL	18,805	441	892	5	93	16,752	221	105	286
113 UNIVERSITY OF DENVER	18,202I	6,509I	3,284I	86I	395I	414I	1,458I	5,360I	796I
114 SYRACUSE UNIVERSITY	17,565	5,120	3,744	162	697	3,441	483	3,157	761
115 UNIVERSITY OF IDAHO	17,453	1,673	321	840	35	13,610	0	974	0
116 NORTH DAKOTA STATE UNIV	17,269	27	273	105	0	16,190	0	674	0
117 DARTMOUTH COLLEGE	16,347	2,209	1,101	195	143	11,821	115	26	737
118 SUNY UPSTATE MEDICAL CTR	15,756	0	0	0	0	15,756	0	0	0
119 UNIV OF P R-MAYAGUEZ	15,733I	171I	13I	269I	0	15,280I	0	0	0
120 THOMAS JEFFERSON UNIV	15,580	0	0	0	0	15,580	0	0	0
TOTAL, 1ST 120 INSTS.	6,783,844	966,508	745,161	533,193	248,936	3,759,175	112,871	268,941	149,059
121 OREGON HLTH SCIENCES UNIV	15,561	0	0	0	0	15,419	142	0	0
122 BRANDEIS UNIVERSITY	15,431	0	2,280	0	532	7,441	596	4,327	255
123 UNIVERSITY OF WYOMING	15,119	1,441	2,056	2,134	195	7,723	167	851	552
124 UNIV OF SOUTH CAROLINA	14,631	787	3,509	3,746	424	4,421	905	839	0
125 TEXAS TECH UNIVERSITY	14,597	5,170	1,231	194	114	6,290	47	1,002	549
126 UNIV OF MD BALT PROF SCH	14,594I	0	0	0	0	14,539I	0	55I	0
127 LEHIGH UNIVERSITY	14,463	7,717	4,563	103	682	571	17	370	40
128 INST OF AGRI UNIV OF TENN	14,144	545	0	0	0	12,781	0	818	0
129 UNIV OF NEVADA - RENO	13,969	869I	379I	1,281I	0	10,496I	96I	848I	0
130 UNIV OF NEW HAMPSHIRE	13,954	506	3,533	2,299	44	5,702	97	104	1,669
TOTAL, 1ST 130 INSTS.	6,930,307	983,543	762,713	543,350	250,927	3,844,558	114,938	278,155	152,124
131 TUFTS UNIVERSITY	13,914I	706I	741I	0	52I	11,933I	251I	211I	0
132 U TENNESSEE KNOXVILLE	13,807I	3,439I	2,992I	1,012I	362I	4,129I	240I	1,633I	0
133 WEST VIRGINIA UNIVERSITY	13,704	2,681	941	488	139	8,084	53	1,313	0
134 MEDICAL COLLEGE OF WIS	13,453I	0	0	0	0	13,453I	0	0	0
135 U OF HOUSTON UNIV PARK	13,102	1,555	3,264	2,302	211	3,044	376	336	14
136 SUNY DOWNSTATE MED CTR	13,072	0	0	0	0	13,072	0	0	0
137 UNIV OF CAL SANTA CRUZ 1/	12,867	0	5,865	1,580	224	4,652	210	336	0
138 UNIVERSITY OF NOTRE DAME	12,793	5,470	5,348	13	165	1,330	64	37	366
139 RUSH UNIVERSITY	12,122	0	0	0	0	11,780	342	0	0
140 ST JOHN'S UNIVERSITY (NY)	12,000E	0	1,588E	0	2,483E	1,884E	1,658E	4,387E	0
TOTAL, 1ST 140 INSTS.	7,061,141	999,394	783,471	548,745	254,563	3,917,919	118,132	286,413	152,504
141 UNIVERSITY OF OREGON MAIN	11,985	27	6,055	913	94	3,431	831	636	0
142 ALBANY MEDICAL COLLEGE	11,823I	0	0	0	0	11,823I	0	0	0
143 TENNESSEE STATE UNIV	11,798I	395I	1,829I	1,561I	611I	4,206I	473I	2,449I	274I
144 HOWARD UNIVERSITY	10,959	1,131	2,461	149	65	6,837	34	282	0
145 UNIVERSITY OF MISSISSIPPI	10,687E	816	797	51	0	8,889E	0	134	0
146 U MASS MED SCHL WORCESTER	10,645I	0	0	0	0	10,645I	0	0	0
147 SOUTHERN ILL U-CARBONDALE	10,474	284	572	2,502	337	4,305	269	1,357	848
148 SUNY AT ALBANY	10,442	0	1,794	3,183	259	1,897	876	2,433	0
149 RICE UNIVERSITY	10,412I	1,957I	4,961I	794I	565I	1,963I	124I	48I	0
150 MED UNIV OF SO CAROLINA	10,347	0	0	0	30	10,317	0	0	0
TOTAL, 1ST 150 INSTS.	7,170,713	1,004,004	801,940	557,898	256,524	3,982,232	120,739	293,750	153,626

SEE FOOTNOTES AT END OF TABLE.

TABLE B-33. — R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

— CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
151 MICHIGAN TECH UNIVERSITY	10,012	5,742	1,485	353	89	2,023	0	320	0
152 UNIV TENN CTR HEALTH SCI	9,959	0	0	0	0	9,959	0	0	0
153 US NAVAL POSTGRAD SCHOOL	9,761	1,922	754	2,440	1,202	40	151	3,252	0
154 U OF CAL SYS WIDE PROGRMS 1/	9,402	95	203	863	0	8,240	0	1	0
155 UNIVERSITY OF LOUISVILLE	8,669	630	334	11	14	5,842	541	699	658
156 N MEX INST MINING & TECH	8,344I	5,141I	261I	2,864I	26I	22I	30I	0	0
157 NEW YORK MEDICAL COLLEGE	8,260	0	0	0	0	8,260	0	0	0
158 UNIV OF MISSOURI ROLLA	8,214	5,716	2,104	16	175	46	14	49	94
159 UNIVERSITY OF N DAKOTA	8,000	1,711I	382I	1,679I	11	2,586I	6I	1,635I	0
160 UNIV OF CENTRAL FLORIDA	7,980	4,119	103	0	177	229	247	271	834
TOTAL, 1ST 160 INSTS.	7,259,314	1,031,080	807,566	566,124	258,208	4,019,479	121,728	299,917	155,212
161 UNIV OF WIS-MILWAUKEE	7,851	1,114	1,821	1,764	74	387	194	1,330	1,167
162 SOUTH DAKOTA STATE UNIV	7,764	500I	88I	92I	0	5,899I	0	1,185I	0
163 DESERT RESEARCH INSTITUTE	7,535	0	0	6,945	0	187	0	403	0
164 NORTHEASTERN UNIVERSITY	7,274I	1,748I	2,512I	34I	214I	879I	683	1,188I	16I
165 SAN DIEGO STATE UNIV	7,202	1,807	1,103	242	856	2,332	525	288	49
166 ST LOUIS UNIVERSITY	7,166	47I	44I	726I	0	5,933I	126I	290I	0
167 WAKE FOREST UNIVERSITY	7,119I	0	94I	0	0	6,782I	0	172I	71I
168 HAHNEMANN UNIVERSITY	7,031I	0	0	0	0	6,766I	265I	0	0
169 UNIF SERV UNIV OF HLTH SC	6,997	0	0	0	0	6,997	0	0	0
170 MEDICAL COL OF GEORGIA	6,822	0	0	0	0	6,822	0	0	0
TOTAL, 1ST 170 INSTS.	7,332,075	1,036,296	813,228	575,927	259,352	4,042,463	123,521	304,773	156,515
171 SUNY COL OF ENV SCI & FOR	6,773I	1,637I	1,005I	2,951I	0	1,580I	0	0	0
172 U OF NEB MED CTR AT OMAHA	6,728	0	0	0	0	6,728	0	0	0
173 UNIV OF TEXAS AT DALLAS	6,643	0	3,164	1,050	144	1,965	136	167	17
174 UNIV OF SOUTH FLORIDA	6,502	796	319	1,554	231	3,328	111	163	0
175 SUNY AT BINGHAMTON	6,441	30	1,506	292	630	1,814	629	1,540	0
176 MED COL OF OHIO AT TOLEDO	6,136I	0	0	0	0	6,136I	0	0	0
177 WRIGHT STATE UNIVERSITY	6,086	988	1,141	93	64	3,545	166	86	3
178 DREXEL UNIVERSITY	5,896	3,539	1,661	0	386	310	0	0	0
179 SAN JOSE STATE UNIVERSITY	5,795I	301I	735I	2,733I	207I	482I	0	0	1,337I
180 CUNY CITY COLLEGE	5,722	1,299	2,883	198	253	989	52	48	0
TOTAL, 1ST 180 INSTS.	7,394,797	1,044,886	825,642	584,398	261,267	4,089,340	124,615	306,777	157,872
181 NORTH TEXAS STATE UNIV	5,674	0	1,776	974	157	819	74	1,207	667
182 U OF ARKANSAS MED SCI CAM	5,407	0	0	0	0	5,407	0	0	0
183 COLORADO SCHOOL OF MINES	5,374	3,025	638	1,481	10	0	0	220	0
184 POLYTECHNIC INST OF N Y	5,276	3,642	1,352	0	34	[illegible]	0	105	143
185 BRIGHAM YOUNG UNIVERSITY	5,260	1,473	1,980	105	147	1,085	27	443	0
186 UNIV OF WEST FLORIDA	5,231	1[illegible]	77	354	1,501	23	6	3,133	0
187 INSTITUTE PAPER CHEMISTRY	5,209	2,923	981	206	296	803	0	0	0
188 WESLEYAN UNIVERSITY	5,179E	0	1,940I	171	811	2,493I	358I	290I	0
189 BOSTON COLLEGE	5,127	0	2,710	48	1,768	258	21	322	0
190 OHIO UNIVERSITY	4,848	2,219	962	92	108	1,23[illegible]	187	45	0
TOTAL, 1ST 190 INSTS.	7,447,382	1,058,305	838,058	587,675	265,369	4,101,463	125,288	312,542	158,682
191 LOYOLA UNIV - CHICAGO	4,775	0	38	0	0	4,101	0	636	0
192 ILLINOIS INST OF TECH	4,762	2,289	1,265	548	274	298	65	6	17
193 NC AG & TECH STATE UNIV	4,745	615	24	0	45	3,866	47	115	33
194 STEVENS INSTITUTE OF TECH	4,686	3,745	558	128	44	0	202	9	0
195 THE MEDICAL COL OF PENNA	4,377	0	0	0	0	4,377	0	0	0
196 UNIV OF P R-MED SCI CMPUS	4,323I	35I	19I	23I	6I	4,206I	4I	24I	6I
197 NORTHERN ILLINOIS UNIV	4,271	0	1,076E	514E	512E	791E	139E	1,239E	0
198 PRAIRIE VIEW A & M UNIV	4,232I	131I	235I	0	70I	3,507I	0	289I	0
199 FLORIDA A & M UNIVERSITY	4,227I	0	551I	525I	513I	1,506I	17I	122I	993I
200 WORCESTER POLY INSTITUTE	4,143	3,500	272	0	20	229	0	122	0
TOTAL, 1ST 200 INSTS.	7,491,923	1,068,620	842,096	589,413	266,853	4,124,344	125,762	315,104	159,731
TOTAL, ALL OTHER INSTS.	253,031	32,282	47,930	28,713	11,385	85,335	11,408	30,408	5,570

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-34. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	4,959,603	735,327	699,292	426,761	204,092	2,568,514	91,042	148,819	85,756
1 JOHNS HOPKINS UNIVERSITY	282,386E	79,719E	55,003E	27,532E	49,117E	62,118E	682E	3,700E	4,515E
2 MASS INST OF TECHNOLOGY	162,801	64,330	49,067	9,965	9,003	21,276	3,789	3,903	1,468
3 STANFORD UNIVERSITY	135,172	43,389	21,785	1,925	8,831	55,938	1,657	1,647	0
4 UNIV OF CAL SAN DIEGO 1/	123,433	803	15,817	66,662	1,737	36,489	1,259	666	0
5 UNIVERSITY OF WASHINGTON	108,512	5,756	7,045	15,478	2,068	61,289	1,995	1,346	13,535
6 COLUMBIA UNIV MAIN DIV	100,574	5,482	11,409	19,074	2,542	[illegible]	506	2,454	0
7 UNIV OF WIS-MADISON	100,026	10,235	11,692	8,339	5,333	[illegible]	5,332	5,944	268
8 CORNELL UNIVERSITY	90,185	17,819	20,529	4,331	2,341	42,006E	780	2,323	26
9 HARVARD UNIVERSITY	89,824	1,037	12,443	4,678	1,773	64,791	885	3,449	768
10 UNIVERSITY OF MINNESOTA	85,767	6,412	8,565	2,104	1,892	62,478	2,861	1,287	168
TOTAL, 1ST 10 INSTS.	1,278,680	234,982	213,355	160,088	84,637	518,405	19,746	26,719	20,748
11 YALE UNIVERSITY	85,205	3,385	9,753	965	3,341	64,602	986	2,173	0
12 UNIVERSITY OF MICHIGAN	84,120	13,279	8,366	4,995	1,133	42,567	4,017	9,503	260
13 UNIV OF CAL LOS ANGELES 1/	83,699	11,408	11,304	5,315	901	50,671	2,815	1,285	0
14 UNIV OF PENNSYLVANIA	80,516	4,883	9,162	1,363	2,071	53,048	993	5,803	3,193
15 UNIV OF CAL BERKELEY 1/	76,917	18,170	18,662	1,627	2,637	29,004	2,238	4,514	65
16 UNIV OF CAL SAN FRANCISCO 1/	67,035	0	0	0	0	67,035	0	0	0
17 UNIVERSITY OF CHICAGO	61,985	0	17,114	2,213	805	40,055	614E	1,184	0
18 UNIV OF ILL URBANA	59,806	18,753	12,274	4,130	3,501	15,683	2,314	2,124	1,027
19 UNIV OF TEXAS AT AUSTIN	58,231	6,682	13,830	4,758	2,731	6,520	969	2,048	20,693
20 UNIV OF SOUTHERN CAL	57,976	19,104	3,143	4,764	2,324	26,001	1,422	1,218	0
TOTAL, 1ST 20 INSTS.	1,994,170	330,646	316,963	190,218	104,081	913,591	36,114	56,571	45,986
21 PENNSYLVANIA STATE UNIV	56,875	24,742	6,004	4,338	788	18,932	261	1,507	303
22 UNIVERSITY OF COLORADO	55,028	2,928	10,482	7,893	662	28,900	1,410	2,753	0
23 WASHINGTON UNIVERSITY	54,350	2,249	2,802	1,134	3,603	43,883	485	194	0
24 NEW YORK UNIVERSITY	49,860	0	2,787	207	6,519	37,415	1,092	785	1,055
25 GEORGIA INSTITUTE OF TECH	49,533	35,766	3,614	2,510	4,169	735	478	1,463	798E
26 UNIVERSITY OF ROCHESTER	48,744	7,918	7,003	60	1,261	30,817	1,138	254	293
27 DUKE UNIVERSITY	46,808	985	3,448	1,082	538	39,648	312	795	0
28 YESHIVA UNIVERSITY	46,102	0	0	0	64	45,828	0	210	0
29 UNIVERSITY OF ARIZONA	44,741	3,812	12,420	3,718	868	22,664	749	1,495	15
30 TEXAS A & M UNIVERSITY	43,813	15,815	4,196	5,112	502	16,798	865	525	0
TOTAL, 1ST 30 INSTS.	2,490,024	424,861	369,719	216,272	123,055	1,198,211	42,904	66,552	48,450
31 UNIV OF CAL DAVIS 1/	43,439	2,078	2,685	344	153	37,909	178	92	0
32 UNIV OF NC AT CHAPEL HILL	43,384	0	3,006	2,216	1,322	33,450	1,681	1,709	0
33 CALIFORNIA INST OF TECH	43,340	8,695	19,218	6,777	1,260	6,975	0	251	164
34 MICHIGAN STATE UNIVERSITY	43,067	1,763	10,748	506	672	26,395	672	2,311	0
35 PURDUE UNIVERSITY	42,147	13,688	7,395	835	1,950	16,133	612	1,539	35
36 OHIO STATE UNIVERSITY	41,438E	8,546E	4,681E	1,006E	870E	19,055E	320E	1,012E	5,948E
37 UNIVERSITY OF IOWA	40,460	2,321E	6,617	135	297	30,297	534	259	0
38 SUNY AT BUFFALO	38,415	1,700	2,181	599	502	32,966	234	188	45
39 UNIVERSITY OF UTAH	37,981	5,873	4,314	1,494	1,929	23,867	160	344	0
40 BAYLOR COL OF MEDICINE	36,772	0	0	0	0	36,772	0	0	0
TOTAL, 1ST 40 INSTS.	2,900,467	469,525	430,524	230,184	132,010	1,462,030	47,295	74,257	54,642
41 NORTHWESTERN UNIVERSITY	36,519	6,388	4,781	501	437	19,438	642	259	4,053
42 UNIVERSITY OF PITTSBURGH	36,334	2,476	6,295	161	854	25,313	314	291	630
43 WOODS HOLE OCNGRPHIC INST	35,997	5,048	0	30,949	0	0	0	0	0
44 OREGON STATE UNIVERSITY	35,530	2,094	1,317	13,162	261	17,542	0	846	308
45 CASE WESTERN RESERVE UNIV	34,963	8,895	2,754	283	109	22,411	237	274	0
46 UNIVERSITY OF CONNECTICUT	34,960	3,455	2,861	811	385	24,973	1,820	625	0
47 UNIVERSITY OF FLORIDA	33,708	5,851	3,173	1,588	631	21,402	605	147	311
48 UNIVERSITY OF MIAMI	32,236	570	270	10,653	279	20,090	131	114	129
49 UNIV OF MD COLLEGE PARK	31,094	4,277	16,396	2,306	2,535	4,095	499	986	0
50 NEW MEXICO STATE UNIV	30,750	16,[illegible]	643	1,093	8,524	3,220	318	116	0
TOTAL, 1ST 50 INSTS.	3,242,558	525,445	469,014	291,691	146,025	1,620,514	51,881	77,915	60,073

SEE FOOTNOTES AT END OF TABLE.

TABLE B-34. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51 CARNEGIE-MELLON UNIV	30,546	7,873	3,837	393	11,475	3,131	1,139	2,081	617
52 INDIANA UNIVERSITY	29,882	58	10,757	267	659	14,011	1,681	831	1,618
53 UNIVERSITY OF VIRGINIA	28,564	4,906	3,473	2,745	648	16,302	259	210	21
54 BOSTON UNIVERSITY	27,906	222	2,011	4	394	24,089	154	561	471E
55 UNIV OF HAWAII-MANOA	27,633	718E	7,587E	9,217E	137E	6,808E	0	230	2,936E
56 UNIV OF CAL IRVINE 1/	27,484	1,150	7,055	0	548	18,531	0	200	0
57 U TEX HLTH SCI CTR DALLAS	26,561	0	0	0	0	26,561	0	0	0
58 SUNY AT STONY BROOK	25,639	1,797	5,453	3,231	826	13,006	711	343	272
59 UNIV ALABAMA BIRMINGHAM	25,509	13	0	0	131	25,365	0	0	0
60 COLORADO STATE UNIVERSITY	25,321	4,489	2,507	3,278	492	12,906	43	1,347	259
TOTAL, 1ST 60 INSTS.	3,517,603	546,671	511,694	310,826	161,335	1,781,224	55,867	83,718	66,267
61 PRINCETON UNIVERSITY	25,027	5,784	8,656	2,693E	1,971	3,279	1,145	1,499	0
62 UNIV OF ILL CHICAGO 2/	24,549	1,935	3,514	90	497	14,909	303	803	2,598
63 ROCKEFELLER UNIVERSITY	23,625	0	1,589	0	297	19,777	1,962	0	0
64 N C STATE UNIV AT RALEIGH	23,286	5,525	2,674	2,726	555	11,439	97	270	0
65 UNIVERSITY OF NEW MEXICO	23,073I	7,368I	1,528I	929I	275I	10,475I	171I	2,327I	0
66 UNIVERSITY OF GEORGIA	22,434	365	827	1,345	1,169	17,238	75	1,415	0
67 VIRGINIA COMMONWLTH UNIV	21,998E	0	602I	0	23I	20,939I	102I	332I	0
68 IOWA ST U OF SCI & TECH	21,050	3,288	1,340	384	1,804	12,695	25	1,111	400
69 CUNY MT SINAI SCH OF MED	20,587	0	0	0	0	20,587	0	0	0
70 EMORY UNIVERSITY	20,163	0	1,216	0	96	18,438	358	55	0
TOTAL, 1ST 70 INSTS.	3,743,395	570,936	533,540	318,993	168,022	1,931,070	60,106	91,530	69,265
71 UNIVERSITY OF CINCINNATI	20,074	2,372	952	65	95	16,224	0	79	287
72 VANDERBILT UNIVERSITY	19,889	596	1,084	82	113	14,507	1,024	483	0
73 BROWN UNIVERSITY	19,728	3,863	3,287	2,477	2,394	6,446	562	699	0
74 UNIV OF RHODE ISLAND	19,326I	2,184I	474I	14,485I	0	2,017I	0	166I	0
75 UTAH STATE UNIVERSITY	19,058	1,177	2,022	10,633	5	4,572	18	529	102
76 VA POLYTECH INST & ST U	19,037	7,753	2,380	715	616	6,836	169	568	0
77 RUTGERS THE ST UNIV OF NJ	18,894	1,849	4,286	525	2,307	5,792	1,936	1,802	397
78 TEMPLE UNIVERSITY	18,567	0	962	77	61	14,327	93	3,047	0
79 LOUISIANA STATE UNIV	18,044	1,813	2,029	2,366	251	11,549	2	34	0
80 UNIV OF CAL SANTA BARBARA 1/	17,863	1,612	7,809	3,665	611	1,526	1,052	1,783	0
TOTAL, 1ST 80 INSTS.	3,933,875	593,955	558,825	354,083	174,475	2,016,799	64,962	100,725	70,051
81 GEORGE WASHINGTON UNIV	17,792	4,124	214	49	2,295	9,433	164	766	747
82 UNIV OF MASS AT AMHERST	17,072	1,926	5,620	1,033	1,863	5,220	893	517	0
83 UNIVERSITY OF DAYTON	16,984	10,610	2,912	256	871	86	1,606	1	642
84 UNIV OF MISSOURI COLUMBIA	16,143	880	526	907	168	12,551	227	884	0
85 U TEX HLTH SCI CTR S ANTO	16,005	0	0	0	0	16,005	0	0	0
86 U TEXAS SYSTEM CANCER CTR	15,112	0	1,110	0	1,459	12,543	0	0	0
87 U TEX HLTH SCI CTR HOUSTN	14,410	0	0	21	0	13,731	0	656	0
88 UNIVERSITY OF OKLAHOMA	14,206	2,658	1,958	1,673	2,166	4,810	257	539	125
89 UNIVERSITY OF KANSAS	14,097I	1,536I	1,248I	332I	173I	6,803I	3,766I	239I	0I
90 UNIV OF ALASKA FAIRBANKS	13,859	293	0	9,272	236	3,392	0	468	198
TOTAL, 1ST 90 INSTS.	4,089,555	615,982	572,413	367,626	183,706	2,101,373	71,875	104,817	71,763
91 UNIVERSITY OF KENTUCKY	13,786	2,511	349	436	126	10,187	0	177	0
92 UNIVERSITY OF DENVER	13,143I	5,050I	2,387I	62I	273I	263I	1,034I	3,883I	391I
93 BRANDEIS UNIVERSITY	12,932	0	2,137	0	356	6,665	466	3,308	0
94 UNIV OF VT & ST AGRIC COL	12,850	280	645	3	92	11,455	209	93	73
95 UNIV OF MD BALT PROF SCH	12,839I	0	0	0	0	12,784I	0	55I	0
96 UNIV OF NEBRASKA-LINCOLN	12,750	910E	2,807E	1,522E	97E	6,882E	53E	479E	0
97 DARTMOUTH COLLEGE	12,730	1,476	895	186	49	10,009	115	0	0
98 WAYNE STATE UNIVERSITY	12,713	1,164	2,273	24	146	8,524	151	353	78
99 WASHINGTON STATE UNIV	12,563	1,884	1,562	136	350	7,264	22	697	648
100 RENSSELAER POLYTECH INST	12,054	9,049	1,705	184	424	344	22	29	297
TOTAL, 1ST 100 INSTS.	4,217,915	638,306	587,173	370,179	185,619	2,175,750	73,947	113,891	73,050

SEE FOOTNOTES AT END OF TABLE.

TABLE B-14. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
101 GEORGETOWN UNIVERSITY	11,630	0	769	0	0	8,892	0	262	1,707
102 UNIV OF CAL RIVERSIDE 1/	11,602	0	2,975	421	67	7,584	332	223	0
103 OKLAHOMA STATE UNIVERSITY	11,544I	4,282I	933I	69I	100I	5,249I	18I	153I	740I
104 UNIVERSITY OF IDAHO	11,496	1,075	181	436	35	9,023	0	746	0
105 TUFTS UNIVERSITY	11,495I	692I	753I	0	341	9,634I	229I	153I	0
106 UNIV OF MED & DENT OF N J	11,456	0	0	0	0	11,456I	0	0	0
107 TULANE UNIVERSITY	11,221	325	88	0	118	10,398	5	287	0
108 UNIVERSITY OF NOTRE DAME	11,177	4,879	5,104	1	152	886	35	0	120
109 U TENNESSEE KNOXVILLE	10,828I	2,696I	2,347I	794I	284I	3,238I	188I	1,281I	0
110 FLORIDA STATE UNIVERSITY	10,810	0	2,864	3,220	594	3,020	820	144	148
TOTAL, 1ST 110 INSTS.	4,331,174	652,255	603,187	375,120	187,003	2,245,130	75,574	117,140	75,765
111 U TEX MED BRNCH GALVESTON	10,428	0	0	0	0	10,428	0	0	0
112 ARIZONA STATE UNIVERSITY	10,288	2,542	3,430	1,551	247	1,248	322	948	0
113 KANS ST U - AG & APP SCI	10,268	1,138	886	145	184	5,417	10	331	2,157
114 OREGON HLTH SCIENCES UNIV	10,013	0	0	0	0	9,910	103	0	0
115 SYRACUSE UNIVERSITY	9,904	2,812	1,838	21	476	2,184	228	2,007	338E
116 US NAVAL POSTGRAD SCHOOL	9,702	1,397	718	2,440	1,202	40	151	3,252	0
117 UNIVERSITY OF DELAWARE	9,763	2,091	1,720	1,687	351	2,180	134	190	1,270
118 SUNY DOWNSTATE MED CTR	9,100	0	0	0	0	9,100	0	0	0
119 UNIVERSITY OF OREGON MAIN	9,031	21	4,716	624	89	2,588	776	217	0
120 HOWARD UNIVERSITY	8,671	871	2,163	132	57	5,254	30	164	0
TOTAL, 1ST 120 INSTS.	4,428,160	663,587	618,658	381,720	189,609	2,293,479	77,328	124,249	79,530
121 UNIV OF MAINE ORONO	8,313	1,121	157	2,069	116	3,694	128	128	90C
122 UNIV OF CAL SANTA CRUZ 1/	8,303	0	2,746	1,095	203	3,854	173	232	0
123 UNIV OF SOUTH CAROLINA	8,260	476	2,699	1,924	221	2,368	409	163	0
124 MEDICAL COLLEGE OF WIS	8,136I	0	0	0	0	8,136I	0	0	0
125 AUBURN UNIVERSITY	8,083	1,567	463	0	30	6,023	0	0	0
126 RICE UNIVERSITY	7,946I	1,385I	3,906I	285I	467I	1,785I	92I	26I	0
127 CLEMSON UNIVERSITY	7,822	2,439	459	0	575	4,058	8	283	0
128 MISSISSIPPI STATE UNIV	7,775	2,500	254	253	1	4,517	0	250	0
129 MED UNIV OF SO CAROLINA	7,629	0	0	0	0	7,629	0	0	0
130 ALBANY MEDICAL COLLEGE	7,621I	0	0	0	0	7,621I	0	0	0
TOTAL, 1ST 130 INSTS.	4,508,048	673,075	629,342	387,346	191,222	2,343,164	78,138	125,331	80,430
131 UNIV OF NEW HAMPSHIRE	7,546	324	3,262	1,540	42	2,177	97	73	31
132 SUNY AT ALBANY	7,418	0	1,627	2,048	222	1,818	741	968	0
133 UNIV OF ARK FAYETTEVILLE	7,283	871	1,143	131	127	4,569	2	203	217
134 WEST VIRGINIA UNIVERSITY	7,196	1,180	399	192	9	4,585	53	778	0
135 UNIV TENN CTR HEALTH SCI	7,188	0	0	0	0	7,188	0	0	0
136 RUSH UNIVERSITY	7,137	0	0	0	0	6,851	286	0	0
137 U MASS MED SCHL WORCESTER	7,070I	0	0	0	0	7,070I	0	0	0
138 U OF HOUSTON UNIV PARK	7,002	2,135	1,744	513	61	2,229	168	150	0
139 UNIF SERV UNIV OF HLTH SC	6,997	0	0	0	0	6,997	0	0	0
140 TENNESSEE STATE UNIV	6,807I	296I	1,077I	1,060I	367I	3,085I	133I	709I	30I
TOTAL, 1ST 140 INSTS.	4,579,692	677,881	638,610	392,830	192,050	2,389,733	79,668	128,212	80,708
141 NEW YORK MEDICAL COLLEGE	6,674	0	0	0	0	6,674	0	0	0
142 UNIVERSITY OF WYOMING	6,591	932	1,489	1,381	155	1,977	122	513	22
143 LEHIGH UNIVERSITY	6,383	3,932	1,779	139	221	307	13	89	3
144 MONTANA STATE UNIVERSITY	6,309	715	848	77	47	4,407	21	194	0
145 UNIVERSITY OF MISSISSIPPI	6,262E	571	673	0	0	4,931E	0	87	0
146 THOMAS JEFFERSON UNIV	6,068	0	0	0	0	6,068	0	0	0
147 UNIV OF NEVADA - RENO	6,000E	395I	143I	657I	0	4,740I	2I	63I	0
148 HAHNEMANN UNIVERSITY	5,929I	0	0	0	0	5,673I	256I	0	0
149 UNIV OF P R-MAYAGUEZ	5,907I	93I	13I	269I	0	5,532I	0	0	0
150 MEDICAL COL OF GEORGIA	5,756	0	0	0	0	5,756	0	0	0
TOTAL, 1ST 150 INSTS.	4,641,571	684,519	643,555	395,353	192,473	2,435,698	80,082	129,158	80,733

SEE FOOTNOTES AT END OF TABLE.

TABLE B-34. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
151 TEXAS TECH UNIVERSITY	5,662	2,207	376	52	91	1,890	31	545	470
152 WAKE FOREST UNIVERSITY	5,640I	0	551	0	0	5,413I	0	172I	0I
153 NORTHEASTERN UNIVERSITY	5,629I	1,908I	1,742I	30I	127I	764I	585I	859I	14I
154 ST LOUIS UNIVERSITY	5,595	471	421	658I	0	4,495I	126I	227I	0
155 UNIVERSITY OF N DAKOTA	5,500	1,313I	356I	1,503I	0I	1,866I	0I	562I	0
156 CUNY CITY COLLEGE	5,494	1,218	2,771	175	253	977	52	48	0
157 SAN DIEGO STATE UNIV	5,480	1,382	990	196	763	2,053	389	107	0
158 SUNY UPSTATE MEDICAL CTR	5,270	0	0	0	0	5,270	0	0	0
159 N MEX INST MINING & TECH	5,056I	3,002I	176I	1,851I	19I	8I	0I	0	0
160 BOSTON COLLEGE	4,871	0	2,675	48	1,756	146	21	225	0
TOTAL, 1ST 160 INSTS.	4,695,768	695,196	652,238	399,866	195,482	2,458,580	81,286	131,903	81,217
161 NC AG & TECH STATE UNIV	4,488	504	17	0	2	3,842	34	73	16
162 INST OF AGRI UNIV OF TENN	4,396	390	0	0	0	3,412	0	594	0
163 UNIVERSITY OF LOUISVILLE	4,294	339	278	11	14	3,133	496	0	23
164 DREXEL UNIVERSITY	4,291	2,494	1,219	0	339	239	0	0	0
165 MED COL OF OHIO AT TOLEDO	4,288I	0	0	0	0	4,288I	0	0	0
166 SOUTHERN ILL U-CARBONDALE	4,163	95	390	1,464	25	1,751	101	54	283
167 UNIV OF TEXAS AT DALLAS	4,128	0	1,540	618	14	1,463	36	57	0
168 POLYTECHNIC INST OF N Y	4,113	2,779E	1,334E	0	0	0	0	0	0
169 UNIV OF P R-MED SCI CMPUS	4,037I	0I	0I	0I	0I	4,037I	0I	0I	0I
170 SAN JOSE STATE UNIVERSITY	3,951I	261I	674I	1,212I	154I	409I	0	0	1,241I
TOTAL, 1ST 170 INSTS.	4,737,917	702,058	658,090	403,171	196,030	2,481,154	81,953	132,681	82,780
171 U OF ARKANSAS MED SCI CAM	3,950	0	0	0	0	3,950	0	0	0
172 NORTH DAKOTA STATE UNIV	3,924	17	224	0	0	3,487E	0	196	0
173 ILLINOIS INST OF TECH	3,891	1,675	1,203	450	274	224	65	0	0
174 PRAIRIE VIEW A & M UNIV	3,768I	131I	74I	0	70I	3,493I	0	0I	0
175 WESLEYAN UNIVERSITY	3,760E	0	1,188I	7I	23I	2,058I	334I	150I	0
176 COLORADO SCHOOL OF MINES	3,675	2,073	560	832	10	0	0	200	0
177 MICHIGAN TECH UNIVERSITY	3,568	2,264	801	99	10	376	0	18	0
178 UNIV OF SOUTH FLORIDA	3,543	272	238	529	192	2,220	84	8	0
179 U OF NEB MED CTR AT OMAHA	3,489	0	0	0	0	3,489	0	0	0
180 UNIV OF MISSOURI ROLLA	3,468	2,241	1,074	4	95	39	12	3	0
TOTAL, 1ST 180 INSTS.	4,774,953	710,731	663,452	405,092	196,704	2,500,490	82,448	133,256	82,780
181 SUNY AT BINGHAMTON	3,438	0	933	108	268	1,351	254	524	0
182 DESERT RESEARCH INSTITUTE	3,389	0	0	3,138	0	13	0	238	0
183 UNIV OF WIS-MILWAUKEE	3,253	581	873	748	36	154	131	681	179
184 THE MEDICAL COL OF PENNA	3,371	0	0	0	0	3,371	0	0	0
185 NORTH TEXAS STATE UNIV	3,249	0	951	675	75	567	48	745	188
186 UNIV OF SOUTH ALABAMA	3,103I	9I	90I	2I	0	3,006I	0	0	0
187 WRIGHT STATE UNIVERSITY	3,035	694	476	21	49	1,643	149	0	3
188 UNIV OF CENTRAL FLORIDA	2,974	1,879	57	0	158	209	247	0	424
189 STEVENS INSTITUTE OF TECH	2,905	2,536	307	18	44	0	0	0	0
190 CATHOLIC UNIV OF AMERICA	2,899	683	1,523	0	71	393	195	34	0
TOTAL, 1ST 190 INSTS.	4,806,699	717,109	668,662	409,802	197,405	2,511,197	83,472	135,478	83,574
191 LOYOLA UNIV - CHICAGO	2,793	0	38	0	0	2,199	0	556	0
192 CLARKSON COLLEGE OF TECH	2,769	1,427	1,134	0	208	0	0	0	0
193 CUNY HUNTER COLLEGE	2,723	0	591	107	2	1,250	368	405	0
194 UNIV ALABAMA HUNTSVILLE	2,497	1,458	801	0	51	154	0	33	0
195 BRIGHAM YOUNG UNIVERSITY	2,479	686	1,073	73	18	459	0	170	0
196 SOUTH DAKOTA STATE UNIV	2,462	308I	31I	65I	0	1,876I	0	182I	0
197 SOUTHERN U & A&M COLLEGE	2,401	42	42	43	15	2,259	0	0	0
198 UNIV OF MASS BOSTON	2,265	0	122I	0	0I	861I	496I	776I	0
199 GALLAUDET COLLEGE	2,115	0	0	0	0	885	332	896	0
200 COLLEGE OF WILLIAM & MARY	2,095	0	1,265I	16I	493I	96I	0	225I	0
TOTAL, 1ST 200 INSTS.	4,831,298	721,030	673,769	410,106	198,192	2,521,236	84,668	138,723	83,574
TOTAL, ALL OTHER INSTS.	128,305	14,297	25,523	16,695	5,900	47,278	6,374	10,096	2,182

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-35. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

	INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
	TOTAL, ALL INSTITUTIONS	2,785,351	365,575	190,734	191,365	74,146	1,641,165	46,128	196,693	79,545
1	UNIVERSITY OF MINNESOTA	70,422	7,545	2,101	1,230	446	55,035	927	1,811	1,327
2	UNIV OF WIS-MADISON	68,256	7,378	3,902	4,922	1,666	42,245	1,207	4,365	2,571
3	CORNELL UNIVERSITY	63,138	5,322E	4,033E	300	361	47,228E	1,100E	4,556E	238
4	TEXAS A & M UNIVERSITY	59,406	14,904	1,875	1,220	25	40,548	136	698	0
5	UNIV OF CAL DAVIS 1/	54,679	744	250	35	18	53,485	38	109	0
6	UNIV OF TEXAS AT AUSTIN	52,339	8,268	10,131	12,059	1,968	4,902	347	8,931	5,733
7	LOUISIANA STATE UNIV	50,339	4,463	2,068	3,295	1,778	35,969	162	2,604	0
8	UNIVERSITY OF MICHIGAN	48,744	6,538	1,158	1,409	1,914	19,676	5,071	12,555	423
9	UNIVERSITY OF GEORGIA	48,231	1,955	1,068	1,259	1,618	33,990	679	7,662	0
10	UNIVERSITY OF ARIZONA	44,451	2,475	7,792	9,430	116	20,441	114	3,907	176
	TOTAL, 1ST 10 INSTS.	560,005	59,992	34,378	35,159	9,910	353,519	9,781	47,198	10,468
11	IOWA ST U OF SCI & TECH	43,811	9,114	1,099	190	3,296	23,962	281	1,892	3,977
12	UNIV OF CAL BERKELEY 1/	42,034	7,038	2,908	882	363	21,182	2,015	6,534	1,112
13	UNIVERSITY OF FLORIDA	39,759	8,693	2,204	759	433	24,884	401	1,016	1,369
14	UNIV OF ILL URBANA	39,329	6,976	2,719	5,426	3,230	12,529	769	6,508	1,172
15	MASS INST OF TECHNOLOGY	37,548	18,137	7,659	1,304	1,365	5,213	480	2,131	1,299
16	N C STATE UNIV AT RALEIGH	36,622	8,287	863	568	1,024	25,329	284	268	0
17	MICHIGAN STATE UNIVERSITY	35,97[illegible]	1,201	2,825	508	277	30,092	342	731	0
18	GEORGIA INSTITUTE OF TECH	33,39[illegible]	24,210	2,436	1,693	2,811	497	322	987	535E
19	PURDUE UNIVERSITY	33,36[illegible]	8,715	745	135	193	19,944	426	2,467	738
20	UNIV OF PENNSYLVANIA	32,97[illegible]	1,454	1,874	355	687	20,760	134	[illegible],333	386
	TOTAL, 1ST 20 INSTS.	934,722	153,317	59,710	46,979	23,589	537,911	15,295	77,065	21,016
21	PENNSYLVANIA STATE UNIV	32,892	8,247	854	3,329	5,348	11,840	107	1,304	1,863
22	OHIO STATE UNIVERSITY	32,708E	6,662E	1,161E	540E	777E	17,755E	112E	1,169E	4,532E
23	UNIV OF NEBRASKA-LINCOLN	31,847	2,368E	1,982E	3,829E	354E	21,169E	343E	1,315E	487E
24	OKLAHOMA STATE UNIVERSITY	30,959I	4,451I	867I	519I	40I	20,854I	0I	2,996I	1,232I
25	RUTGERS THE ST UNIV OF NJ	30,835	2,241	1,511	3,105	1,015	15,754	1,515	3,052	2,642
26	UNIV OF CAL LOS ANGELES 1/	29,567	3,325	518	1,688	32	18,407	447	5,150	0
27	U TEXAS SYSTEM CANCER CTR	29,397	0	964	0	744	27,689	0	0	0
28	HARVARD UNIVERSITY	28,778E	332E	3,987E	1,499E	568E	20,758E	283E	1,105E	246F
29	ROCKEFELLER UNIVERSITY	28,375	0	1,286	0	429	24,514	2,146	0	0
30	UNIV OF MISSOURI COLUMBIA	28,088	2,008	654	451	84	21,920	365	2,575	31
	TOTAL, 1ST 30 INSTS.	1,238,268	182,951	73,494	61,939	32,980	738,571	20,553	95,731	32,049
31	MISSISSIPPI STATE UNIV	27,939	1,352	287	237	0	24,282	0	1,258	523
32	STANFORD UNIVERSITY	27,859	6,829	3,894	1,155	1,808	12,537	955	681	0
33	OREGON STATE UNIVERSITY	27,193	1,470	417	3,680	434	20,266	0	818	108
34	UNIVERSITY OF KENTUCKY	27,043	6,063	312	268	114	20,131	0	155	0
35	UNIVERSITY OF OKLAHOMA	26,781	4,611	3,091	4,062	1,646	10,019	402	2,894	56
36	UNIV OF SOUTHERN CAL	26,419	6,002	1,328	1,581	1,291	13,577	767	1,873	0
37	UNIV OF CAL RIVERSIDE 1/	25,634	0	284	483	253	24,358	23	233	0
38	UNIVERSITY OF WASHINGTON	25,011	2,447	656	1,219	315	18,051	160	1,264	899
39	KANS ST U - AG & APP SCI	24,862	1,959	287	60	52	16,390	7	322	5,785
40	UNIVERSITY OF CONNECTICUT	23,942	3,015	2,473	701	333	14,941	1,574	905	0
	TOTAL, 1ST 40 INSTS.	1,500,951	216,699	86,523	75,385	39,226	913,123	24,441	106,134	39,420
41	UNIV OF CAL SAN DIEGO 1/	23,575	82	1,582	12,169	522	7,617	981	622	0
42	UNIV OF ALASKA FAIRBANKS	23,466	1,630	0	11,322	0	7,308	0	1,919	1,287
43	UNIV OF CAL SAN FRANCISCO 1/	22,212	0	0	0	0	22,212	0	0	0
44	VA POLYTECH INST & ST U	21,383	4,488	1,056	868	68	14,176	112	615	0
45	WASHINGTON STATE UNIV	21,020	1,276	48	62	0	18,936	20	17E	661E
46	UNIVERSITY OF COLORADO	20,770	885	1,453	771	35	16,719	441	466	0
47	JOHNS HOPKINS UNIVERSITY	20,729E	1,641E	2,311E	3,519E	222E	11,519E	221E	514E	782E
48	UNIV OF ILL CHICAGO 2/	19,948	1,293	981	460	112	12,174	48	1,259	3,621
49	NEW YORK UNIVERSITY	18,684	0	191	51	334	16,341	68	1,032	667
50	BAYLOR COL OF MEDICINE	18,214	0	0	0	0	18,214	0	0	0
	TOTAL, 1ST 50 INSTS.	1,710,952	227,994	94,145	104,607	40,519	1,058,339	26,332	112,578	44,438

SEE FOOTNOTES AT END OF TABLE.

TABLE B-35. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

— CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51 AUBURN UNIVERSITY	18,093	2,607	262	0	3	15,221	0	0	0
52 UNIV OF HAWAII-MANOA	17,768	843E	1,845E	3,644E	0E	8,212E	0	1,295E	1,929E
53 UTAH STATE UNIVERSITY	17,653	773	150	4,911	72	9,013	115	552	2,067
54 UNIVERSITY OF ROCHESTER	16,561	2,322	999	53	65	12,431	884	119	88
55 COLORADO STATE UNIVERSITY	16,251	3,740	558	788	197	8,621	10	1,719	618
56 UNIVERSITY OF MIAMI	16,047	361	148	3,648	118	11,106	106	156	404
57 YALE UNIVERSITY	15,064	301	464	131	523	11,342	963	1,340	0
58 WASHINGTON UNIVERSITY	15,007	433	501	131	305	13,499	83	95	0
59 UNIV OF ARK FAYETTEVILLE	14,625	2,009	744	134	327	10,193	125	1,010	83
60 NORTHWESTERN UNIVERSITY	14,556	1,409	952	93	17	9,765	173	66	2,481
TOTAL, 1ST 60 INSTS.	1,872,577	242,792	99,968	118,140	42,146	1,167,702	28,791	118,930	54,108
61 INDIANA UNIVERSITY	14,449	26	1,949	204	246	10,525	338	763	398
62 UNIVERSITY OF IOWA	14,311	2,442E	1,012	66	752	8,672	306	1,061	0
63 CLEMSON UNIVERSITY	13,944	1,699	361	0	147	11,378	20	232	107
64 NORTH DAKOTA STATE UNIV	13,345	10	49	105	0	12,703E	0	478	0
65 UNIVERSITY OF CHICAGO	13,329	0	2,220E	288E	129E	9,359E	378E	955E	0
66 COLUMBIA UNIV MAIN DIV	13,273	1,460	152	2,040	0	6,538	56	3,027	0
67 CARNEGIE-MELLON UNIV	12,628	2,213	378	1,063	4,270	2,955	53	514	1,182
68 UNIV OF MASS AT AMHERST	12,624	1,395	3,295	1,645	460	4,962	223	644	0
69 MONTANA STATE UNIVERSITY	12,587	1,179	864	12	101	9,762	12	657	0
70 ARIZONA STATE UNIVERSITY	12,006	4,600	2,156	857	133	677	318	1,651	1,614
TOTAL, 1ST 70 INSTS.	2,005,073	257,816	112,404	124,420	48,384	1,245,233	30,495	128,912	57,409
71 PRINCETON UNIVERSITY	11,990	2,629	1,659	1,774E	792	1,730	229	3,177	0
72 FLORIDA STATE UNIVERSITY	11,957	0	2,865	1,668	2,356	2,449	741	1,689	189
73 ST JOHN'S UNIVERSITY (NY)	11,800E	0	1,563E	0	2,483E	1,709E	1,658E	4,387E	0
74 SUNY AT BUFFALO	11,714	1,393	1,072	108	198	8,241	82	373	247
75 SUNY AT STONY BROOK	11,302	793	2,404	1,421	364	5,735	314	151	120
76 WAYNE STATE UNIVERSITY	11,277	1,181	980	5	76	7,134	116	1,068	717
77 TULANE UNIVERSITY	11,219	300	134	2	56	10,516	4	207	0
78 UNIV OF MAINE ORONO	11,141	1,744	763	2,272	309	4,228	300	1,438	87
79 RENSSELAER POLYTECH INST	11,030	8,280	1,560	169	389	314	21	26	271
80 UNIVERSITY OF PITTSBURGH	10,979	722	677	30	574	7,916	95	518	447
TOTAL, 1ST 80 INSTS.	2,119,482	274,858	126,081	131,869	55,981	1,295,205	34,055	141,946	59,487
81 NEW MEXICO STATE UNIV	10,829	1,993	144	1,122	1,746	5,459	15	349	1
82 SUNY UPSTATE MEDICAL CTR	10,486	0	0	0	0	10,486	0	0	0
83 UNIVERSITY OF NEW MEXICO	10,283I	1,614I	483I	205I	330I	6,071I	43I	1,537I	0
84 U TEX HLTH SCI CTR DALLAS	9,895	0	0	0	0	9,895	0	0	0
85 UNIV OF P R-MAYAGUEZ	9,826I	78I	0I	0I	0	9,748I	0	0	0
86 INST OF AGRI UNIV OF TENN	9,748	155	0	0	0	9,369	0	224	0
87 THOMAS JEFFERSON UNIV	9,512	0	0	0	0	9,512	0	0	0
88 UNIVERSITY OF DELAWARE	9,497	2,763E	516	1,888	163	2,408	84	510	1,165
89 UNIVERSITY OF VIRGINIA	9,056	1,648	516	183	209	5,099	117	1,107	177
90 U OF CAL SYS WIDE PRGRMS 1/	9,038	90	188	847	0	7,912	0	1	0
TOTAL, 1ST 90 INSTS.	2,217,652	283,199	127,928	136,114	58,429	1,371,164	34,314	145,674	60,830
91 TEXAS TECH UNIVERSITY	8,935	2,963	855	142	23	4,400	16	457	79
92 UNIVERSITY OF CINCINNATI	8,934	846	297	105	5	7,117	13	14	537
93 UNIVERSITY OF UTAH	8,849	2,058	1,162	667	587	4,186	46	143	0
94 U TEX HLTH SCI CTR S ANTO	8,738	0	0	0	0	8,738	0	0	0
95 U TEX MED BRNCH GALVESTON	8,583	0	0	0	0	8,583	0	0	0
96 UNIVERSITY OF WYOMING	8,528	509	567	753	40	5,746	45	338	530
97 GEORGETOWN UNIVERSITY	8,255	0	289	0	0	5,759	0	128	2,079
98 DUKE UNIVERSITY	8,232	567	378	1,313	147	5,687	12	128	0
99 LEHIGH UNIVERSITY	8,080	3,785	2,784	364	461	364	4	281	37
100 UNIVERSITY OF KANSAS	8,014I	684I	313I	2,796I	45I	1,242I	1,382I	1,192I	360I
TOTAL, 1ST 100 INSTS.	2,302,800	294,611	134,573	142,254	59,737	1,422,986	35,832	148,355	64,452

SEE FOOTNOTES AT END OF TABLE.

TABLE B-35. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
101 CUNY MT SINAI SCH OF MED	7,974	0	0	0	0	7,974	0	0	0
102 UNIV OF NEVADA - RENO	7,969E	474I	236I	624I	0	5,756I	94I	785I	0
103 CASE WESTERN RESERVE UNIV	7,728	1,970	850	66	1	4,720	6	115	0
104 YESHIVA UNIVERSITY	7,710	0	0	0	196	7,469	0	45	0
105 SYRACUSE UNIVERSITY	7,661	2,308	1,906	141	221	1,257	255	1,150	423E
106 UNIV OF MD COLLEGE PARK	7,580E	1,631E	3,123E	506E	698E	1,272E	36E	314E	0
107 UNIV OF NC AT CHAPEL HILL	7,508	0	41	1,266	66	3,356	1,019	1,760	0
108 UNIV OF MED & DENT OF N J	7,375	0	0	0	0	7,375I	0	0	0
109 WEST VIRGINIA UNIVERSITY	6,508	1,501	542	296	130	3,499	0	540	0
110 CALIFORNIA INST OF TECH	6,484	1,380	1,809	562	856	1,485	0	268	124
TOTAL, 1ST 110 INSTS.	2,377,297	303,875	143,080	145,715	61,905	1,467,149	37,242	153,332	64,999
111 MICHIGAN TECH UNIVERSITY	6,444	3,478	684	254	79	1,647	0	302	0
112 VANDERBILT UNIVERSITY	6,433	767	504	4	49	3,891	384	834	0
113 UNIV OF NEW HAMPSHIRE	6,408	182	271	759	2	3,525	0	31	1,638
114 UNIV OF SOUTH CAROLINA	6,371	311	810	1,822	203	2,053	496	676	0
115 SOUTHERN ILL U-CARBONDALE	6,311	189	182	1,038	312	2,554	168	1,303	565
116 U OF HOUSTON UNIV PARK	6,100	1,420	1,518	1,789	150	815	208	186	14
117 WOODS HOLE OCNGRPHIC INST	6,073	397	0	5,676	0	0	0	0	0
118 TEMPLE UNIVERSITY	6,065	0	65	183	130	5,457	92	138	0
119 UNIVERSITY OF IDAHO	5,957	598	140	404	0	4,587	0	228	0
120 UNIV OF VT & ST AGRIC COL	5,955	161	247	2	1	5,297	22	12	213
TOTAL, 1ST 120 INSTS.	2,439,414	311,378	147,501	157,646	62,831	1,496,975	38,612	157,042	67,429
121 UNIV OF CAL IRVINE 1/	5,809	206	172	30	30	5,193	0	178	0
122 UNIV ALABAMA BIRMINGHAM	5,802	102	61	0	52	5,587	0	0	0
123 OREGON HLTH SCIENCES UNIV	5,548	0	0	0	0	5,509	39	0	0
124 UNIV OF RHODE ISLAND	5,440I	2,212I	0I	1,772I	0	894I	0	562I	0
125 MEDICAL COLLEGE OF WIS	5,317I	0	0	0	0	5,317I	0	0	0
126 SOUTH DAKOTA STATE UNIV	5,302	192I	57I	27I	0	4,023I	0	1,003I	0
127 UNIVERSITY OF DENVER	5,159I	1,459I	897I	24I	122I	151I	424I	1,477I	605I
128 UNIV OF CAL SANTA BARBARA 1/	5,021	557	1,103	1,064	663	184	505	945	0
129 UNIV OF CENTRAL FLORIDA	5,006	4,240	46	0	19	20	0	271	410
130 TENNESSEE STATE UNIV	4,991I	99I	752I	501I	244I	1,121I	290I	1,740I	244I
TOTAL, 1ST 130 INSTS.	2,492,809	320,445	150,589	161,064	63,961	1,524,974	39,870	163,218	68,688
131 HUSH UNIVERSITY	4,985	0	0	0	0	4,929	56	0	0
132 U TEX HLTH SCI CTR HOUSTN	4,952	0	0	605	0	4,297	0	50	0
133 SUNY COL OF ENV SCI & FOR	4,877I	1,611I	451I	1,823I	0	992I	0	0	0
134 UNIV OF MISSOURI ROLLA	4,746	3,475	1,030	12	80	7	2	46	94
135 INSTITUTE PAPER CHEMISTRY	4,644	2,396	943	206	296	803	0	0	0
136 UNIV OF CAL SANTA CRUZ 1/	4,564	0	3,119	485	21	798	37	104	0
137 BOSTON UNIVERSITY	4,515	105	179	40	83	2,133	191	23	1,761E
138 UNIV OF WIS-MILWAUKEE	4,468	533	948	1,016	38	235	63	649	988
139 UNIVERSITY OF MISSISSIPPI	4,425E	245	124	51	0	3,958E	0	47	0
140 UNIVERSITY OF LOUISVILLE	4,375	291	56	0	0	2,709	45	639	635
TOTAL, 1ST 140 INSTS.	2,539,360	329,101	157,439	165,302	64,479	1,545,833	40,264	164,776	72,166
141 VIRGINIA COMMONWLTH UNIV	4,237E	0	70I	0	0I	3,869I	87I	211I	0
142 ALBANY MEDICAL COLLEGE	4,202I	0	0	0	0	4,202I	0	0	0
143 DESERT RESEARCH INSTITUTE	4,146	0	0	3,807	0	174	0	165	0
144 EMORY UNIVERSITY	4,121	0	276	0	6	3,806	21	12	0
145 SUNY DOWNSTATE MED CTR	3,972	0	0	0	0	3,972	0	0	0
146 DARTMOUTH COLLEGE	3,617	733	206	9	94	1,812	0	26	737
147 U MASS MED SCHL WORCESTER	3,575I	0	0	0	0	3,575I	0	0	0
148 UNIV OF WEST FLORIDA	3,430	137	77	184	331	9	6	2,686	0
149 N MEX INST MINING & TECH	3,288I	2,139I	85I	1,013I	7I	14I	30I	0	0
150 U OF NEB MED CTR AT OMAHA	3,239	0	0	0	0	3,239	0	0	0
TOTAL, 1ST 150 INSTS.	2,577,187	332,110	158,153	170,315	64,917	1,570,505	40,408	167,876	72,903

SEE FOOTNOTES AT END OF TABLE.

TABLE B-35. — NON-FEDERAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
151 UNIV OF MISSOURI SYS OFF	3,230	1,324	0	865	0	807	0	0	234
152 OLD DOMINION UNIVERSITY	3,182I	24I	762I	948I	0	1,448I	0	0	0
153 BROWN UNIVERSITY	3,077	594	201	128	342	1,696	1	115	0
154 WRIGHT STATE UNIVERSITY	3,051	294	665	72	15	1,902	17	86	0
155 SUNY AT ALBANY	3,024	0	173	1,135	37	79	135	1,465	0
156 SUNY AT BINGHAMTON	3,003	30	573	184	362	463	375	1,016	0
157 FLORIDA A & M UNIVERSITY	2,986I	0	501I	499I	500I	493I	0I	0I	993I
158 U TENNESSEE KNOXVILLE	2,979I	743I	645I	218I	78I	891I	52I	352I	C
159 UNIV OF SOUTH FLORIDA	2,959	524	81	1,025	39	1,108	27	155	0
160 UNIVERSITY OF OREGON MAIN	2,954	6	1,339	289	5	843	55	417	0
TOTAL, 1ST 160 INSTS.	2,607,632	335,649	163,093	175,678	66,295	1,580,235	41,070	171,482	74,130
161 UNIVERSITY OF DAYTON	2,946	2,118	479	33	113	11	209	26	67E
162 GEORGE WASHINGTON UNIV	2,846	247	15	2	152	911	1	72	796
163 OHIO UNIVERSITY	2,836	1,524	487	52	26	679	23	45	0
164 BRIGHAM YOUNG UNIVERSITY	2,781	787	907	32	129	626	27	273	0
165 UNIV TENN CTR HEALTH SCI	2,771	0	0	0	0	2,771	0	0	0
166 MED UNIV OF SO CAROLINA	2,718	0	0	0	30	2,688	0	0	0
167 WORCESTER POLY INSTITUTE	2,649	2,489	54	0	1	17	0	88	0
168 NORTHERN ILLINOIS UNIV	2,628	0	699E	364E	239E	508E	63E	755E	0
169 UNIV OF TEXAS AT DALLAS	2,515	0	1,224	432	130	502	100	110	17
170 NEW YORK INST TECHNOLOGY	2,509	388	54	0	1,461	575	31	0	0
TOTAL, 1ST 170 INSTS.	2,634,831	343,202	166,912	176,593	68,576	1,589,523	41,524	173,491	75,010
171 UNIVERSITY OF N DAKOTA	2,500	398I	126I	176I	1I	720I	6I	1,073I	C
172 BRANDEIS UNIVERSITY	2,499	0	143	0	176	776	130	1,019	255
173 RICE UNIVERSITY	2,466I	572I	1,055I	509I	98I	178I	32I	22I	0
174 NORTH TEXAS STATE UNIV	2,425	0	825	299	82	252	26	462	479
175 TUFTS UNIVERSITY	2,419I	14I	8I	0	18I	2,299I	22I	58I	0
176 HOWARD UNIVERSITY	2,288	260	298	17	8	1,583	4	118	0
177 U OF MD CENTER FOR EES	2,220	0	0	2,220	0	0	0	0	0
178 UNIVERSITY OF MONTANA	2,208	0	20	188	9	1,256	199	286	250
179 CATHOLIC UNIV OF P R	2,180	0	510E	0	225	385	99	281	680E
180 CALIF ST COL STANISLAUS	2,155	0	474	0	160	437	417	667	0
TOTAL, 1ST 180 INSTS.	2,658,191	344,446	170,371	180,002	69,353	1,597,409	42,459	177,477	76,674
181 LOYOLA UNIV - CHICAGO	1,982	0	0	0	0	1,902	0	80	0
182 UNIV OF ARK PINE BLUFF	1,981I	4I	217I	0I	720I	582I	0	404I	54I
183 MED COL OF OHIO AT TOLEDO	1,848I	0	0	0	0	1,848I	0	0	0
184 SAN JOSE STATE UNIVERSITY	1,844I	40I	61I	1,521I	53I	73I	0	0	95I
185 STEVENS INSTITUTE OF TECH	1,781	1,209	251	110	0	0	202	9	0
186 UNIV OF MD BALT PROF SCH	1,755I	0	0	0	0	1,755I	0	0I	0
187 SAN DIEGO STATE UNIV	1,722	425	513	46	93	279	136	181	49
188 U HLTH SCI/CHCGO MED SCH	1,712I	0	0	0	0	1,712I	0	0	0
189 UNIV OF P R-RIO PIEDRAS	1,702I	0	197I	0	324I	201I	0	980I	0
190 COLORADO SCHOOL OF MINES	1,699	952	78	649	0	0	0	20	0
TOTAL, 1ST 190 INSTS.	2,676,217	347,076	171,688	182,328	70,543	1,605,761	42,797	179,151	76,873
191 NORTHEASTERN UNIVERSITY	1,645I	240I	770I	4I	87I	115I	98I	329I	2I
192 LOUISIANA TECH UNIVERSITY	1,616	860	22	0	1	481	C	232	20
193 UNIVERSITY OF NOTRE DAME	1,616	591	244	12	13	444	29	37	246
194 DREXEL UNIVERSITY	1,605	1,045	442	0	47	71	0	0	0
195 NEW YORK MEDICAL COLLEGE	1,586	0	0	0	0	1,586	0	0	0
196 ST LOUIS UNIVERSITY	1,571	0I	2I	68I	0	1,438I	0I	63I	0
197 NEW MEXICO HIGHLANDS UNIV	1,549	0	716	0	0	483	164	186	0
198 WAKE FOREST UNIVERSITY	1,479I	0	39I	0	0	1,369I	0	0I	71I
199 UNIVERSITY OF LOWELL	1,468	234	839	170	15	201	6	3	0
200 U OF ARKANSAS MED SCI CAM	1,457	0	0	0	0	1,457	0	0	0
TOTAL, 1ST 200 INSTS.	2,691,809	350,046	174,762	182,582	70,706	1,613,406	43,094	180,001	77,212
TOTAL, ALL OTHER INSTS.	93,542	15,529	15,972	8,783	3,440	27,759	3,034	16,692	2,333

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-36. — R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	4,968,764	645,223	506,424	443,832	131,875	2,778,844	90,712	244,209	127,645
1 UNIV OF WIS-MADISON	168,282	17,613	15,594	13,261	6,999	95,128	6,539	10,309	2,839
2 UNIVERSITY OF MINNESOTA	156,189	13,957	10,666	3,334	2,338	117,513	3,788	3,098	1,495
3 UNIV OF CAL SAN DIEGO 1/	147,008	885	17,399	78,831	2,259	44,106	2,240	1,288	0
4 UNIVERSITY OF WASHINGTON	133,523	8,203	7,701	16,697	2,383	79,340	2,155	2,610	14,434
5 UNIVERSITY OF MICHIGAN	132,864	19,817	9,524	6,404	3,047	62,243	9,088	22,058	683
6 UNIV OF CAL BERKELEY 1/	118,951	25,208	21,570	2,509	3,000	50,186	4,253	11,048	1,177
7 UNIV OF CAL LOS ANGELES 1/	113,266	14,733	11,822	7,003	933	59,078	3,262	6,435	0
8 UNIV OF TEXAS AT AUSTIN	110,570	14,950	23,961	16,817	4,699	11,422	1,316	10,979	26,426
9 TEXAS A & M UNIVERSITY	103,219	30,719	6,071	6,332	527	57,346	1,001	1,223	0
10 UNIV OF ILL URBANA	99,135	25,729	14,993	9,556	6,731	28,212	3,083	8,632	2,199
TOTAL, 1ST 10 INSTS.	1,283,007	171,814	139,301	160,744	32,916	614,574	36,725	77,680	49,253
11 UNIV OF CAL DAVIS 1/	98,118	2,822	2,935	379	171	91,394	216	201	0
12 PENNSYLVANIA STATE UNIV	89,767	32,989	6,858	7,667	6,136	30,772	368	2,811	2,166
13 UNIV OF CAL SAN FRANCISCO 1/	89,247	0	0	0	0	89,247	0	0	0
14 UNIVERSITY OF ARIZONA	89,192	6,287	20,212	13,148	984	42,105	863	5,402	191
15 GEORGIA INSTITUTE OF TECH	82,924	59,876	6,050	4,203	6,980	1,232	800	2,450	1,333
16 MICHIGAN STATE UNIVERSITY	79,043	2,964	13,573	1,014	949	56,487	1,014	3,042	0
17 UNIVERSITY OF COLORADO	75,798	3,813	11,935	8,664	697	45,619	1,851	3,219	0
18 PURDUE UNIVERSITY	75,510	22,403	8,100	970	2,143	36,077	1,038	4,006	773
19 OHIO STATE UNIVERSITY	74,146E	15,208E	5,842E	1,546E	1,647E	36,810E	432E	2,181E	10,480E
20 UNIVERSITY OF FLORIDA	73,467	14,544	5,377	2,347	1,064	46,286	1,006	1,163	1,680
TOTAL, 1ST 20 INSTS.	2,110,219	332,720	220,183	200,682	53,687	1,090,603	46,313	102,195	65,876
21 UNIVERSITY OF GEORGIA	70,665	2,320	1,895	2,604	2,787	51,228	754	9,077	0
22 LOUISIANA STATE UNIV	68,383	6,276	4,097	5,661	2,029	47,518	164	2,638	0
23 IOWA ST U OF SCI & TECH	64,861	12,402	2,439	574	5,100	36,660	306	3,003	4,377
24 OREGON STATE UNIVERSITY	62,723	3,564	1,734	16,842	695	37,808	0	1,664	416
25 N C STATE UNIV AT RALEIGH	59,909	13,812	3,537	3,294	1,579	36,768	381	538	0
26 UNIVERSITY OF CONNECTICUT	58,902	6,500	5,334	1,512	718	39,914	3,394	1,530	0
27 UNIVERSITY OF IOWA	54,771	4,763	7,629	201	1,049	38,969	840	1,320	0
28 UNIV OF NC AT CHAPEL HILL	50,892	0	3,047	3,482	1,388	36,806	2,700	3,469	0
29 SUNY AT BUFFALO	50,129	3,093	3,253	707	700	41,207	316	56	292
30 RUTGERS THE ST UNIV OF NJ	49,729	4,090	5,797	3,630	3,322	21,546	3,451	4,854	3,039
TOTAL, 1ST 30 INSTS.	2,701,133	389,540	258,945	239,189	73,054	1,479,027	56,619	130,809	74,000
31 UNIVERSITY OF PITTSBURGH	47,313	3,198	6,972	191	1,428	33,229	409	809	1,077
32 UNIVERSITY OF UTAH	46,830	7,931	5,476	2,161	2,516	28,053	206	487	0
33 UNIV OF HAWAII-MANOA	45,401	1,561E	9,432E	12,861E	137E	15,020E	0	1,525E	4,865E
34 UNIV OF NEBRASKA-LINCOLN	44,597	3,278E	4,789E	5,351E	451E	28,051E	396E	1,794E	487E
35 U TEXAS SYSTEM CANCER CTR	44,509	0	2,074	0	2,203	40,232	0	0	0
36 UNIV OF ILL CHICAGO 2/	44,497	3,228	4,395	550	609	27,083	351	2,062	6,219
37 INDIANA UNIVERSITY	44,331	84	12,706	471	905	24,536	2,019	1,594	2,016
38 UNIV OF MISSOURI COLUMBIA	44,231	2,888	1,180	1,358	252	34,471	592	3,459	31
39 OKLAHOMA STATE UNIVERSITY	42,903I	8,733I	1,800I	588I	140I	26,103I	18I	3,149I	1,972I
40 NEW MEXICO STATE UNIV	41,579	18,829	787	2,215	10,270	8,679	333	465	1
TOTAL, 1ST 40 INSTS.	3,146,374	439,270	308,556	264,935	91,965	1,744,484	60,943	146,153	90,668
41 COLORADO STATE UNIVERSITY	41,572	8,229	3,065	4,066	689	21,527	53	3,066	877
42 UNIVERSITY OF OKLAHOMA	40,987	7,269	5,049	5,735	3,812	14,829	659	3,453	181
43 UNIVERSITY OF KENTUCKY	40,829	8,574	661	704	240	30,318	0	332	0
44 VA POLYTECH INST & ST U	40,420	12,241	3,436	1,583	684	21,012	281	1,183	0
45 UNIV OF MD COLLEGE PARK	38,674E	5,908E	19,519E	2,812E	3,233E	5,367E	535E	1,300E	0
46 UNIVERSITY OF VIRGINIA	37,620	6,554	3,989	2,928	857	21,401	376	1,317	198
47 UNIV OF ALASKA FAIRBANKS	37,325	1,923	0	20,594	236	10,700	0	2,387	1,485
48 UNIV OF CAL RIVERSIDE 1/	37,236	0	3,259	904	320	31,942	355	456	0
49 SUNY AT STONY BROOK	36,941	2,590	7,857	4,652	1,190	18,741	1,025	494	392
50 UTAH STATE UNIVERSITY	36,711	1,950	2,172	15,544	77	13,585	133	1,081	2,169
TOTAL, 1ST 50 INSTS.	3,535,289	494,508	357,563	324,457	103,303	1,933,906	64,360	161,222	95,970

SEE FOOTNOTES AT END OF TABLE.

TABLE B-36. — R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51 U TEX HLTH SCI CTR DALLAS	36,456	0	0	0	0	36,456	0	0	0
52 MISSISSIPPI STATE UNIV	35,714	3,852	541	490	1	28,799	0	1,508	523
53 KANS ST U - AG & APP SCI	35,130	3,097	1,173	205	236	21,807	17	653	7,942
54 WASHINGTON STATE UNIV	33,583	3,160	1,610	198	350	26,200	42	714E	1,309E
55 UNIVERSITY OF NEW MEXICO	33,356I	8,982I	2,011I	1,134I	605I	16,546I	214I	3,864I	0
56 UNIV OF CAL IRVINE 1/	33,293	1,356	7,227	30	578	23,724	0	378	0
57 UNIV ALABAMA BIRMINGHAM	31,311	115	61	0	183	30,952	0	0	0
58 UNIV OF MASS AT AMHERST	29,696	3,321	8,915	2,678	2,323	10,182	1,116	1,161	0
59 UNIVERSITY OF CINCINNATI	29,008	3,218	1,249	170	100	23,341	13	93	824
60 VIRGINIA COMMONWLTH UNIV	26,235	0	672I	0	23I	24,808I	189I	543I	0
TOTAL, 1ST 60 INSTS.	3,859,071	521,609	381,022	329,362	107,702	2,176,721	65,951	170,136	106,568
61 AUBURN UNIVERSITY	26,176	4,174	725	0	33	21,244	0	0	0
62 UNIV OF RHODE ISLAND	24,766I	4,396I	474I	16,257I	0	2,911I	0	728I	0
63 U TEX HLTH SCI CTR S ANTO	24,743	0	0	0	0	24,743	0	0	0
64 TEMPLE UNIVERSITY	24,632	0	1,027	260	191	19,784	185	3,185	0
65 WAYNE STATE UNIVERSITY	23,990	2,345	3,253	29	222	15,658	267	1,421	795
66 UNIV OF CAL SANTA BARBARA 1/	22,884	1,969	8,912	4,729	1,274	1,710	1,557	2,733	0
67 FLORIDA STATE UNIVERSITY	22,767	0	5,729	4,888	2,950	5,469	1,561	1,833	337
68 ARIZONA STATE UNIVERSITY	22,294	7,142	5,586	2,408	380	1,925	640	2,599	1,614
69 UNIVERSITY OF KANSAS	22,111I	2,220I	1,561I	3,128I	218I	8,045I	5,148I	1,431I	360I
70 UNIV OF ARK FAYETTEVILLE	21,908	2,880	1,907	265	454	14,762	127	1,213	300
TOTAL, 1ST 70 INSTS.	4,095,342	546,735	410,196	361,326	113,424	2,292,972	75,436	185,279	109,974
71 CLEMSON UNIVERSITY	21,766	4,138	820	0	722	15,436	28	515	107
72 UNIV OF MAINE ORONO	19,454	2,865	920	4,341	425	7,922	428	1,566	987
73 U TEX HLTH SCI CTR HOUSTN	19,362	0	0	626	0	18,028	0	706	0
74 UNIVERSITY OF DELAWARE	19,080	4,814E	2,236	3,575	514	4,588	218	700	2,435
75 U TEX MED BRNCH GALVESTON	19,011	0	0	0	0	19,011	0	0	0
76 MONTANA STATE UNIVERSITY	18,896	1,894	1,712	89	148	14,169	33	851	0
77 UNIV OF MED & DENT OF N J	18,831	0	0	0	0	18,831I	0	0	0
78 UNIV OF VT & ST AGRIC COL	18,805	441	892	5	93	16,752	231	105	286
79 UNIVERSITY OF IDAHO	17,453	1,673	321	840	35	13,610	0	974	0
80 NORTH DAKOTA STATE UNIV	17,269	27	273	105	0	16,190	0	674	0
TOTAL, 1ST 80 INSTS.	4,285,269	562,587	417,370	370,907	115,361	2,437,509	76,3 4	191,372	113,789
81 SUNY UPSTATE MEDICAL CTR	15,756	0	0	0	0	15,756	0	0	0
82 UNIV OF P R-MAYAGUEZ	15,733I	171I	13I	269I	0	15,280I	0	0	0
83 OREGON HLTH SCIENCES UNIV	15,561	0	0	0	0	15,419	142	0	0
84 UNIVERSITY OF WYOMING	15,119	1,441	2,056	2,134	195	7,723	167	851	552
85 UNIV OF SOUTH CAROLINA	14,631	787	3,509	3,746	424	4,421	905	839	0
86 TEXAS TECH UNIVERSITY	14,597	5,170	1,231	194	114	6,290	47	1,002	549
87 UNIV OF MD BALT PROF SCH	14,594I	0	0	0	0	14,539I	0	55I	0
88 INST OF AGRI UNIV OF TENN	14,144	545	0	0	0	12,781	0	818	0
89 UNIV OF NEVADA - RENO	13,969	869I	379I	1,281I	0	10,496I	96I	848I	0
90 UNIV OF NEW HAMPSHIRE	13,954	506	3,533	2,299	44	5,702	97	104	1,669
TOTAL, 1ST 90 INSTS.	4,433,327	572,076	428,091	380,830	116,138	2,545,916	77,828	195,889	116,559
91 U TENNESSEE KNOXVILLE	13,807I	3,439I	2,992I	1,012I	362I	4,129I	240I	1,633I	0
92 WEST VIRGINIA UNIVERSITY	13,704	2,681	941	488	139	8,084	53	1,318	0
93 U OF HOUSTON UNIV PARK	13,102	3,555	3,264	2,302	211	3,044	376	336	14
94 SUNY DOWNSTATE MED CTR	13,072	0	0	0	0	13,072	0	0	0
95 UNIV OF CAL SANTA CRUZ 1/	12,867	0	5,865	1,580	224	4,652	210	336	0
96 UNIVERSITY OF OREGON MAIN	11,985	27	6,055	913	94	3,431	831	634	0
97 TENNESSEE STATE UNIV	11,798I	395I	1,829I	1,561I	611I	4,206I	473I	2,449I	274I
98 UNIVERSITY OF MISSISSIPPI	10,687E	816	797	51	0	8,889E	0	134	0
99 U MASS MED SCHL WORCESTER	10,645I	0	0	0	0	10,645I	0	0	0
100 SOUTHERN ILL U-CARBONDALE	10,474	284	572	2,502	337	4,305	269	1,357	848
TOTAL, 1ST 100 INSTS.	4,555,468	583,273	450,406	391,239	118,116	2,610,373	80,280	204,086	117,695
TOTAL, ALL OTHER INSTS.	413,296	61,950	56,018	52,793	13,759	168,471	10,432	40,123	9,950

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-37. — FEDERALLY FINANCED R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	2,850,287	372,458	375,507	284,157	80,552	1,519,867	58,887	94,243	64,616
1 UNIV OF CAL SAN DIEGO 1/	123,433	803	15,817	66,662	1,737	36,489	1,259	666	0
2 UNIVERSITY OF WASHINGTON	108,512	5,756	7,045	15,478	2,068	61,289	1,995	1,346	13,535
3 UNIV OF WIS-MADISON	100,026	10,235	11,692	8,339	5,333	52,883	5,332	5,944	268
4 UNIVERSITY OF MINNESOTA	85,767	6,412	8,565	2,104	1,892	62,478	2,861	1,287	168
5 UNIVERSITY OF MICHIGAN	84,120	13,279	8,366	4,995	1,133	42,567	4,017	9,503	260
6 UNIV OF CAL LOS ANGELES 1/	83,699	11,408	11,304	5,315	901	50,671	2,915	1,285	0
7 UNIV OF CAL BERKELEY 1/	76,917	18,170	18,662	1,627	2,637	29,004	2,238	4,514	65
8 UNIV OF CAL SAN FRANCISCO 1/	67,035	0	0	0	0	67,035	0	0	0
9 UNIV OF ILL URBANA	59,806	18,753	12,274	4,130	3,501	15,683	2,314	2,124	1,027
10 UNIV OF TEXAS AT AUSTIN	58,231	6,682	13,830	4,758	2,731	6,520	969	2,048	20,693
TOTAL, 1ST 10 INSTS.	847,546	91,498	107,555	113,408	21,933	424,619	23,800	28,717	36,016
11 PENNSYLVANIA STATE UNIV	56,875	24,742	6,004	4,338	788	18,932	261	1,507	303
12 UNIVERSITY OF COLORADO	55,028	2,928	10,482	7,893	662	28,900	1,410	2,753	0
13 GEORGIA INSTITUTE OF TECH	49,533	35,766	3,614	2,510	4,169	735	478	1,463	798E
14 UNIVERSITY OF ARIZONA	44,741	3,812	12,420	3,718	868	21,664	749	1,495	15
15 TEXAS A & M UNIVERSITY	43,813	14,814	4,196	5,112	502	16,798	865	525	0
16 UNIV OF CAL DAVIS 1/	43,4[illegible]	2,078	2,[illegible]	344	153	37,909	178	92	0
17 UNIV OF NC AT CHAPEL HILL	43,[illegible]	0	3,006	2,216	1,322	33,450	1,681	1,709	0
18 MICHIGAN STATE UNIVERSITY	43,0[illegible]	1,763	10,748	[illegible]	672	26,395	672	2,311	0
19 PURDUE UNIVERSITY	42,147	13,688	7,355	835	1,950	16,133	612	1,539	35
20 OHIO STATE UNIVERSITY	41,438E	8,546E	4,681E	1,006E	870E	19,055E	320E	1,012E	5,948E
TOTAL, 1ST 20 INSTS.	1,311,011	200,636	172,746	141,886	33,889	644,590	31,026	43,123	43,115
21 UNIVERSITY OF IOWA	40,460	2,321E	6,617	135	297	30,297	534	259	0
22 SUNY AT BUFFALO	38,415	1,700	2,181	599	502	32,966	234	188	45
23 UNIVERSITY OF UTAH	37,981	5,873	4,314	1,494	1,929	23,867	160	344	0
24 UNIVERSITY OF PITTSBURGH	36,334	2,476	6,295	161	854	25,313	314	291	630
25 OREGON STATE UNIVERSITY	35,530	2,094	1,317	13,162	261	17,542	0	846	308
26 UNIVERSITY OF CONNECTICUT	34,960	3,485	2,861	811	385	24,973	1,820	625	0
27 UNIVERSITY OF FLORIDA	33,708	5,851	3,173	1,588	631	21,402	605	147	311
28 UNIV OF MD COLLEGE PARK	31,094	4,277	16,396	2,306	2,535	4,095	499	986	0
29 NEW MEXICO STATE UNIV	30,750	16,836	643	1,093	8,524	3,220	318	116	0
30 INDIANA UNIVERSITY	29,882	58	10,757	267	659	14,011	1,681	831	1,618
TOTAL, 1ST 30 INSTS.	1,660,125	245,607	227,300	163,502	50,466	842,276	37,191	47,796	46,027
31 UNIVERSITY OF VIRGINIA	28,564	4,906	3,473	2,745	648	16,302	259	210	21
32 UNIV OF HAWAII-MANOA	27,633	718E	7,587E	9,217E	137E	6,808E	0	230	2,936E
33 UNIV OF CAL IRVINE 1/	27,484	1,150	7,055	0	548	18,531	0	200	0
34 U TEX HLTH SCI CTR DALLAS	26,561	0	0	0	0	26,561	0	0	0
35 SUNY AT STONY BROOK	25,639	1,797	5,453	3,231	826	13,006	711	343	272
36 UNIV ALABAMA BIRMINGHAM	25,509	13	0	0	131	25,365	0	0	0
37 COLORADO STATE UNIVERSITY	25,321	4,489	2,507	3,278	492	12,906	43	1,347	259
38 UNIV OF ILL CHICAGO 2/	24,549	1,935	3,414	90	497	14,909	303	803	2,598
39 N C STATE UNIV AT RALEIGH	23,286	5,525	2,674	2,726	595	11,439	97	270	0
40 UNIVERSITY OF NEW MEXICO	23,073I	7,368I	1,528I	929I	275I	10,475I	171I	2,327I	0
TOTAL, 1ST 40 INSTS.	1,917,744	273,508	260,991	185,718	54,575	998,578	38,775	53,486	52,113
41 UNIVERSITY OF GEORGIA	22,434	365	827	1,345	1,169	17,238	75	1,415	0
42 VIRGINIA COMMONWLTH UNIV	21,998E	0	602I	0	23I	20,939I	102I	332I	0
43 IOWA ST U OF SCI & TECH	21,050	3,288	1,340	384	1,804	12,698	25	1,111	400
44 UNIVERSITY OF CINCINNATI	20,074	2,372	952	65	95	16,224	0	79	287
45 UNIV OF RHODE ISLAND	19,326I	2,184I	474I	14,485I	0	2,017I	0	166I	0
46 UTAH STATE UNIVERSITY	19,058	1,177	2,022	10,633	5	4,572	18	529	102
47 VA POLYTECH INST & ST U	19,037	7,753	2,380	715	616	6,836	169	568	0
48 RUTGERS THE ST UNIV OF NJ	18,894	1,849	4,286	525	2,307	5,792	1,936	1,802	397
49 TEMPLE UNIVERSITY	18,567	0	962	77	61	14,327	93	3,047	0
50 LOUISIANA STATE UNIV	18,044	1,813	2,029	2,366	251	11,549	2	34	0
TOTAL, 1ST 50 INSTS.	2,116,226	294,309	276,865	216,313	60,906	1,110,770	41,195	62,569	53,299

SEE FOOTNOTES AT END OF TABLE.

TABLE B-37. — FEDERALLY FINANCED R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983 - CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIV OF CAL SANTA BARBARA 1/	17,863	1,412	7,809	3,665	611	1,526	1,052	1,788	0
52 UNIV OF MASS AT AMHERST	17,072	1,926	5,620	1,033	1,863	5,220	893	517	0
53 UNIV OF MISSOURI COLUMBIA	16,143	880	526	907	168	12,551	227	884	0
54 U TEX HLTH SCI CTR S ANTO	16,005	0	0	0	0	16,005	0	0	0
55 U TEXAS SYSTEM CANCER CTR	15,112	0	1,120	0	1,459	12,543	0	0	0
56 U TEX HLTH SCI CTR HOUSTN	14,410	0	0	21	0	13,731	0	658	0
57 UNIVERSITY OF OKLAHOMA	14,206	2,658	1,958	1,673	2,166	4,810	257	559	125
58 UNIVERSITY OF KANSAS	14,097I	1,536I	1,248I	332I	173I	6,803I	3,766I	239I	0I
59 UNIV OF ALASKA FAIRBANKS	13,859	293	0	9,272	236	3,392	0	468	198
60 UNIVERSITY OF KENTUCKY	13,786	2,511	349	436	126	10,187	0	177	0
TOTAL, 1ST 60 INSTS.	2,268,779	305,525	295,485	233,652	67,708	1,197,538	47,390	67,859	53,622
61 UNIV OF VT & ST AGRIC COL	12,850	280	645	3	92	11,455	209	93	73
62 UNIV OF MD BALT PROF SCH	12,839I	0	0	0	0	12,784I	0	55I	0
63 UNIV OF NEBRASKA-LINCOLN	12,750	910E	2,807E	1,522E	97E	6,882E	53E	479E	0
64 WAYNE STATE UNIVERSITY	12,713	1,164	2,273	24	146	8,524	151	353	78
65 WASHINGTON STATE UNIV	12,563	1,884	1,562	136	390	7,264	22	697	648
66 UNIV OF CAL RIVERSIDE 1/	11,602	0	2,975	421	67	7,584	322	223	0
67 OKLAHOMA STATE UNIVERSITY	11,544I	4,282I	933I	69I	100I	5,249I	18I	153I	740I
68 UNIVERSITY OF IDAHO	11,496	1,075	181	436	35	9,023	0	746	0
69 UNIV OF MED & DENT OF N J	11,456	0	0	0	0	11,456I	0	0	0
70 U TENNESSEE KNOXVILLE	10,828I	2,696I	2,347I	794I	284I	3,238I	188I	1,281I	0
TOTAL, 1ST 70 INSTS.	2,389,420	317,816	309,208	237,057	68,879	1,280,997	48,363	71,939	55,161
71 FLORIDA STATE UNIVERSITY	10,810	0	2,864	3,220	594	3,020	820	144	148
72 U TEX MED BRNCH GALVESTON	10,428	0	0	0	0	10,428	0	0	0
73 ARIZONA STATE UNIVERSITY	10,288	2,542	3,430	1,551	247	1,248	322	948	0
74 KANS ST U - AG & APP SCI	10,268	1,138	886	245	184	5,417	10	331	2,157
75 OREGON HLTH SCIENCES UNIV	10,013	0	0	0	0	9,910	103	0	0
76 US NAVAL POSTGRAD SCHOOL	9,700	1,897	718	2,440	1,202	40	151	3,252	0
77 UNIVERSITY OF DELAWARE	9,583	2,051	1,720	1,687	351	2,180	134	190	1,270
78 SUNY DOWNSTATE MED CTR	9,100	0	0	0	0	9,100	0	0	0
79 UNIVERSITY OF OREGON MAIN	9,031	21	4,716	624	89	2,588	776	217	0
80 UNIV OF MAINE ORONO	8,313	1,121	157	2,069	116	3,694	128	128	900
TOTAL, 1ST 80 INSTS.	2,486,954	326,586	323,699	248,193	71,662	1,328,622	50,807	77,149	59,636
81 UNIV OF CAL SANTA CRUZ 1/	8,303	0	2,746	1,095	203	3,854	173	232	0
82 UNIV OF SOUTH CAROLINA	8,260	476	2,699	1,924	221	2,368	409	163	0
83 AUBURN UNIVERSITY	8,083	1,567	463	0	30	6,023	0	0	0
84 CLEMSON UNIVERSITY	7,822	2,439	459	0	575	4,058	8	283	0
85 MISSISSIPPI STATE UNIV	7,775	2,500	254	253	1	4,517	0	250	0
86 MED UNIV OF SO CAROLINA	7,629	0	0	0	0	7,629	0	0	0
87 UNIV OF NEW HAMPSHIRE	7,546	324	3,262	1,540	42	2,177	97	73	31
88 SUNY AT ALBANY	7,416	0	1,621	2,048	222	1,818	741	968	0
89 UNIV OF ARK FAYETTEVILLE	7,283	871	1,163	131	127	4,569	2	203	217
90 WEST VIRGINIA UNIVERSITY	7,196	1,180	399	192	9	4,585	53	778	0
TOTAL, 1ST 90 INSTS.	2,564,269	335,943	336,765	255,976	73,092	1,370,220	52,290	80,099	59,884
91 UNIV TENN CTR HEALTH SCI	7,188	0	0	0	0	7,188	0	0	0
92 U MASS MED SCHL WORCESTER	7,070I	0	0	0	0	7,070I	0	0	0
93 U OF HOUSTON UNIV PARK	7,002	2,135	1,746	513	61	2,229	168	150	0
94 UNIF SERV UNIV OF HLTH SC	6,997	0	0	0	0	6,997	0	0	0
95 TENNESSEE STATE UNIV	6,807I	296I	1,077I	1,060I	367I	3,085I	183I	709I	30I
96 UNIVERSITY OF WYOMING	6,591	932	1,480	1,381	155	1,917	122	513	22
97 MONTANA STATE UNIVERSITY	6,309	715	1,[illegible]	77	47	4,407	21	194	0
98 UNIVERSITY OF MISSISSIPPI	6,262E	571	675	0	0	4,931E	0	87	0
99 UNIV OF NEVADA - RENO	6,000E	395I	143I	657I	0	4,740I	2I	63I	0
100 UNIV OF P R-MAYAGUEZ	5,907I	93I	13I	269I	0	5,532I	0	0	0
TOTAL, 1ST 100 INSTS.	2,630,402	341,080	342,754	259,933	73,722	1,418,376	52,786	81,815	59,936
TOTAL, ALL OTHER INSTS.	219,885	31,378	32,753	24,224	6,230	101,491	6,101	12,428	4,680

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-38. — R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	2,776,190	455,679	383,602	174,294	146,363	1,430,835	44,458	101,303	37,656
1 JOHNS HOPKINS UNIVERSITY	303,115E	81,340E	57,314E	31,051E	49,339E	73,637E	903E	4,214E	5,297E
2 MASS INST OF TECHNOLOGY	200,349	82,447	56,726	11,269	10,368	26,489	4,269	6,034	2,727
3 STANFORD UNIVERSITY	163,031	50,218	25,679	3,080	10,639	68,475	2,612	2,328	0
4 CORNELL UNIVERSITY	153,323	23,141E	24,562E	4,631	2,702	89,264E	1,880E	6,879E	264
5 HARVARD UNIVERSITY	118,602E	1,369E	16,430E	6,177E	2,341E	85,549E	1,168E	4,554E	1,014E
6 COLUMBIA UNIV MAIN DIV	113,847	6,942	11,561	21,114	2,542	65,645	562	5,481	0
7 UNIV OF PENNSYLVANIA	113,499	6,337	11,036	1,718	2,758	73,808	1,127	13,136	3,579
8 YALE UNIVERSITY	100,269	3,686	10,217	1,096	3,864	75,944	1,949	3,513	0
9 UNIV OF SOUTHERN CAL	84,395	25,106	4,471	6,345	3,615	39,578	2,189	3,091	0
10 UNIVERSITY OF CHICAGO	79,314	0	19,334E	2,501E	934E	49,414E	992E	2,139E	0
TOTAL, 1ST 10 INSTS.	1,425,744	280,626	237,330	88,982	89,102	647,803	17,651	51,369	12,881
11 WASHINGTON UNIVERSITY	69,357	2,682	3,303	1,265	3,908	57,342	568	280	0
12 NEW YORK UNIVERSITY	68,544	0	2,978	258	6,853	53,756	1,160	1,817	1,722
13 UNIVERSITY OF ROCHESTER	65,705	10,240	7,602	113	1,326	43,248	2,022	373	381
14 DUKE UNIVERSITY	55,040	1,552	3,826	2,395	685	45,335	324	923	0
15 BAYLOR COL OF MEDICINE	54,986	0	0	0	0	54,986	0	0	0
16 YESHIVA UNIVERSITY	53,612	0	0	0	260	53,297	0	255	0
17 ROCKEFELLER UNIVERSITY	52,000	0	2,875	0	726	44,291	4,108	0	0
18 NORTHWESTERN UNIVERSITY	51,075	7,797	5,333	594	454	29,203	835	325	4,534
19 CALIFORNIA INST OF TECH	49,824	10,075	21,027	7,339	2,116	8,460	0	519	288
20 UNIVERSITY OF MIAMI	48,283	931	418	14,301	397	31,196	237	270	533
TOTAL, 1ST 20 INSTS.	1,993,970	313,903	284,692	115,247	105,827	1,068,917	26,905	56,140	22,339
21 CARNEGIE-MELLON UNIV	43,174	10,086	4,215	1,456	15,745	6,086	1,192	2,595	1,799
22 CASE WESTERN RESERVE UNIV	42,691	10,865	3,604	349	110	27,131	243	389	0
23 WOODS HOLE OCNGRPHIC INST	42,070	5,445	0	36,625	0	0	0	0	0
24 PRINCETON UNIVERSITY	37,017	8,413	10,315	4,467	2,763	5,009	1,374	4,676	0
25 BOSTON UNIVERSITY	32,421	327	2,190	44	477	26,222	345	584	2,232
26 CUNY MT SINAI SCH OF MED	28,561	0	0	0	0	28,561	0	0	0
27 VANDERBILT UNIVERSITY	26,322	1,363	1,588	86	162	20,398	1,408	1,317	0
28 EMORY UNIVERSITY	24,284	0	1,492	0	102	22,244	379	67	0
29 RENSSELAER POLYTECH INST	23,084	17,329	3,265	353	813	658	43	55	568
30 BROWN UNIVERSITY	22,805	4,457	3,488	2,605	2,736	8,142	563	814	0
TOTAL, 1ST 30 INSTS.	2,316,399	372,188	314,849	161,232	128,735	1,213,368	32,452	66,637	26,938
31 TULANE UNIVERSITY	22,440	625	222	2	174	20,914	9	494	0
32 GEORGE WASHINGTON UNIV	20,638	4,371	229	51	2,447	10,344	165	1,488	1,543
33 UNIVERSITY OF DAYTON	19,930	12,728	3,291	289	984	97	1,815	17	709E
34 GEORGETOWN UNIVERSITY	19,885	0	1,058	0	0	14,651	0	390	3,786
35 UNIVERSITY OF DENVER	18,302I	6,509I	3,284I	86I	395I	414I	1,458I	5,360I	796I
36 SYRACUSE UNIVERSITY	17,565	5,120	3,744	162	697	3,441	483	3,157	761
37 DARTMOUTH COLLEGE	16,347	2,209	1,101	195	143	11,821	115	26	737
38 THOMAS JEFFERSON UNIV	15,580	0	0	0	0	15,580	0	0	0
39 BRANDEIS UNIVERSITY	15,431	0	2,280	0	532	7,441	596	4,327	255
40 LEHIGH UNIVERSITY	14,463	7,717	4,563	503	682	571	17	370	40
TOTAL, 1ST 40 INSTS.	2,496,980	411,467	334,621	162,520	134,789	1,298,642	37,110	82,266	35,565
41 TUFTS UNIVERSITY	13,914I	706I	761I	0	52I	11,933I	251I	211I	0
42 MEDICAL COLLEGE OF WIS	13,453I	0	0	0	0	13,453I	0	0	0
43 UNIVERSITY OF NOTRE DAME	12,793	5,470	5,348	13	165	1,330	64	37	366
44 RUSH UNIVERSITY	12,122	0	0	0	0	11,780	342	0	0
45 ST JOHN'S UNIVERSITY (NY)	12,000E	0	1,588E	0	2,483E	1,884E	1,658E	4,387E	0
46 ALBANY MEDICAL COLLEGE	11,823I	0	0	0	0	11,823I	0	0	0
47 HOWARD UNIVERSITY	10,959	1,131	2,461	149	65	6,837	34	282	0
48 RICE UNIVERSITY	10,412I	1,957I	4,961I	794I	565I	1,963I	12I	48I	0
49 NEW YORK MEDICAL COLLEGE	8,260	0	0	0	0	8,260	0	0	0
50 NORTHEASTERN UNIVERSITY	7,274I	1,748I	2,512I	34I	214I	879I	683I	1,188I	16I
TOTAL, 1ST 50 INSTS.	2,609,990	422,479	352,252	163,510	138,333	1,368,784	40,266	88,419	35,947

SEE FOOTNOTES AT END OF TABLE.

TABLE B-38. — R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 ST LOUIS UNIVERSITY	7,166	471	441	726I	0	5,933I	126I	290I	0
52 WAKE FOREST UNIVERSITY	7,119I	0	94I	0	0	6,782I	0	172I	71I
53 HAHNEMANN UNIVERSITY	7,031I	0	0	0	0	6,766I	265I	0	0
54 DREXEL UNIVERSITY	5,896	3,539	1,661	0	386	310	0	0	0
55 POLYTECHNIC INST OF N Y	5,276	3,642	1,352	0	34	0	0	105	143
56 BRIGHAM YOUNG UNIVERSITY	5,260	1,473	1,980	105	147	1,085	27	443	0
57 INSTITUTE PAPER CHEMISTRY	5,209	2,923	981	206	296	803	0	0	0
58 WESLEYAN UNIVERSITY	5,179E	0	1,940I	17I	81I	2,493I	358I	290I	0
59 BOSTON COLLEGE	5,127	0	2,710	48	1,768	258	21	322	0
60 LOYOLA UNIV - CHICAGO	4,775	0	38	0	0	4,101	0	636	0
TOTAL, 1ST 60 INSTS.	2,668,028	434,103	363,052	164,612	141,045	1,397,315	41,063	90,677	36,161
61 ILLINOIS INST OF TECH	4,762	2,289	1,265	548	274	298	65	6	17
62 STEVENS INSTITUTE OF TECH	4,686	3,745	558	128	44	0	202	9	0
63 THE MEDICAL COL OF PENNA	4,377	0	0	0	0	4,377	0	0	0
64 WORCESTER POLY INSTITUTE	4,143	3,500	272	0	20	229	0	122	0
65 CLARKSON COLLEGE OF TECH	4,015	2,034	1,730	0	245	6	0	0	0
66 OREGON GRADUATE CENTER	3,218I	0	2,341I	862I	15I	0	0	0	0
67 U HLTH SCI/CHCGO MED SCH	3,006I	0	0	0	0	3,006I	0	0	0
68 CATHOLIC UNIV OF AMERICA	2,899	683	1,523	0	71	393	195	34	0
69 SOUTHERN METHODIST UNIV	2,822	506	148	631	347	94	25	1,035	36
70 NEW YORK INST TECHNOLOGY	2,737	388	54	0	1,461	803	31	0	0
TOTAL, 1ST 70 INSTS.	2,704,6[illegible]	447,248	370,943	166,781	143,522	1,406,521	41,581	91,883	36,214
71 CATHOLIC UNIV OF P R	2,731	0	901E	0	225	385	99	281	840E
72 LOMA LINDA UNIVERSITY	2,623I	0	0	0	500I	1,856I	267I	0	0
73 CLARK UNIVERSITY	2,575I	0	626I	1,456I	28I	91I	276I	98I	0
74 TEXAS COL OF OSTEO MED	2,410	0	0	0	0	2,410	0	0	0
75 CREIGHTON UNIVERSITY	2,316	0	1	0	0	2,315	0	0	0
76 GALLAUDET COLLEGE	2,235	0	0	0	0	885	332	1,018	0
77 ATLANTA UNIVERSITY	2,195	0	1,306	0	110	533	0	246	0
78 MCMARRY MEDICAL COLLEGE	2,157	0	0	0	0	2,157I	0	0	0
79 TEXAS CHRISTIAN UNIV	1,773	0	506	105	0	179	113	870	0
80 WELLESLEY COLLEGE	1,643	0	39	0	9	160	21	1,414	0
TOTAL, 1ST 80 INSTS.	2,727,351	447,248	374,322	168,342	144,394	1,417,492	42,689	95,810	37,054
81 FLORIDA INST OF TECH	1,520	263	12	444	0	643	0	0	158
82 FAIRLEIGH DICKINSON UNIV	1,514	3	101	511	0	531	131	215	22
83 UNIVERSITY OF TULSA	1,434	1,084	77	143	0	10	0	120	0
84 MARQUETTE UNIVERSITY	1,379	269	289	0	50	711	4	41	15
85 WENTWORTH INST OF TECH	1,327	0	0	1,327	0	0	0	0	0
86 OCCIDENTAL COLLEGE	1,278	0	27	1,111	0	140	0	0	0
87 SMITH COLLEGE	1,365	0	91	157	1	361	23	599	33
88 THE WRIGHT INSTITUTE	1,236I	0	0	0	0	0	1,236I	0	0
89 FORDHAM UNIVERSITY	1,211	0	182	0	50	129	29	778	43
90 NE OHIO UNIVS MED SCHOOL	1,204	0	0	0	0	1,204	0	0	0
TOTAL, 1ST 90 INSTS.	2,740,719	448,867	375,101	172,035	144,495	1,421,221	44,112	97,563	37,325
91 MANHATTAN COLLEGE	1,133	992	3	0	74	36	28	0	0
92 ALFRED UNIVERSITY	1,088	1,088	0	0	0	0	0	0	0
93 INSTITUTE OF TEXTILE TECH	1,039I	680I	97I	113I	149I	0	0	0	0
94 AMERICAN UNIVERSITY	1,028	0	693	0	116	75	99	45	0
95 CHICAGO COL OF OSTEO MED	1,010	0	0	0	0	1,010	0	0	0
96 TUSKEGEE INSTITUTE	998E	263E	0	0	0	735E	0	0	0
97 CLAREMONT GRADUATE SCHOOL	984I	0	0	0	101I	0	1I	882I	0
98 UNIVERSITY OF SANTA CLARA	961	657	62	37	0	155	50	0	0
99 POMONA COLLEGE	959I	0	367I	0	81I	354I	79I	78I	0
100 HARVEY MUDD COLLEGE	950	798	106	0	37	4	0	5	0
TOTAL, 1ST 100 INSTS.	2,750,869	453,345	376,429	172,185	145,053	1,423,590	44,369	98,573	37,325
TOTAL, ALL OTHER INSTS.	25,321	2,334	7,173	2,109	1,310	7,245	2,089	2,730	331

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-39. — FEDERALLY FINANCED R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANK	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	2,109,316	362,869	323,785	142,604	123,540	1,048,647	32,155	54,576	21,140
1 JOHNS HOPKINS UNIVERSITY	282,386E	79,719E	55,003E	27,532E	49,117E	62,118E	682E	3,700E	4,515E
2 MASS INST OF TECHNOLOGY	162,801	44,330	49,067	9,965	9,003	21,276	3,789	3,903	1,468
3 STANFORD UNIVERSITY	135,172	43,389	21,785	1,925	8,831	55,938	1,657	1,647	0
4 COLUMBIA UNIV MAIN DIV	100,574	5,482	11,409	19,074	2,542	59,107	506	2,454	0
5 CORNELL UNIVERSITY	90,185	17,819	20,529	4,331	2,341	42,036E	780	2,323	26
6 HARVARD UNIVERSITY	89,824	1,037	12,443	4,678	1,773	64,791	885	3,449	768
7 YALE UNIVERSITY	85,205	3,385	9,753	965	3,341	64,602	986	2,173	0
8 UNIV OF PENNSYLVANIA	80,516	4,883	9,162	1,363	2,071	53,048	993	5,803	3,193
9 UNIVERSITY OF CHICAGO	61,985	D	17,114	2,213	805	40,055	614E	1,184	0
10 UNIV OF SOUTHERN CAL	57,976	19,104	3,143	4,764	2,324	26,001	1,422	1,218	0
TOTAL, 1ST 10 INSTS.	1,146,624	239,148	209,408	76,810	82,148	488,972	12,314	27,854	9,970
11 WASHINGTON UNIVERSITY	54,350	2,249	2,802	1,134	3,603	43,883	485	194	0
12 NEW YORK UNIVERSITY	49,860	D	2,787	207	6,519	37,415	1,092	785	1,055
13 UNIVERSITY OF ROCHESTER	48,744	7,918	7,003	60	1,261	30,817	1,138	254	293
14 DUKE UNIVERSITY	46,808	985	3,448	1,082	538	39,648	312	795	0
15 YESHIVA UNIVERSITY	46,102	0	0	0	64	45,828	0	210	0
16 CALIFORNIA INST OF TECH	43,340	8,695	19,218	6,777	1,260	6,975	0	251	164
17 BAYLOR COL OF MEDICINE	36,772	0	0	0	0	36,772	0	0	0
18 NORTHWESTERN UNIVERSITY	36,519	6,388	4,781	501	437	19,438	662	299	4,053
19 WOODS HOLE OCNGRPHIC INST	35,997	5,048	0	30,949	0	0	0	0	0
20 CASE WESTERN RESERVE UNIV	34,963	8,895	2,754	283	109	22,411	237	274	0
TOTAL, 1ST 20 INSTS.	1,580,079	279,326	252,201	117,803	95,939	772,159	16,240	30,876	15,535
21 UNIVERSITY OF MIAMI	32,236	570	270	10,653	279	20,090	131	114	129
22 CARNEGIE-MELLON UNIV	30,546	7,873	3,837	393	11,475	3,131	1,139	2,081	617
23 BOSTON UNIVERSITY	27,906	222	2,011	4	394	24,089	154	561	471E
24 PRINCETON UNIVERSITY	25,027	5,784	8,656	2,693E	1,971	3,279	1,145	1,499	0
25 ROCKEFELLER UNIVERSITY	23,625	0	1,589	0	297	19,777	1,962	0	0
26 CUNY MT SINAI SCH OF MED	20,587	0	0	0	0	20,587	0	0	0
27 EMORY UNIVERSITY	20,163	0	1,216	0	96	18,438	358	55	0
28 VANDERBILT UNIVERSITY	19,889	596	1,084	82	113	16,507	1,024	483	0
29 BROWN UNIVERSITY	19,728	3,863	3,287	2,477	2,394	6,446	562	699	0
30 GEORGE WASHINGTON UNIV	17,792	4,124	214	42	2,295	9,433	164	766	747
TOTAL, 1ST 30 INSTS.	1,817,578	302,358	274,365	134,154	115,253	913,936	22,879	37,134	17,499
31 UNIVERSITY OF DAYTON	16,984	10,610	2,912	256	871	86	1,606	1	642
32 UNIVERSITY OF DENVER	13,143I	5,050I	2,387I	62I	273I	263I	1,034I	3,883I	191I
33 BRANDEIS UNIVERSITY	12,932	0	2,137	0	356	6,665	444	3,308	0
34 DARTMOUTH COLLEGE	12,730	1,476	855	186	49	10,009	115	0	0
35 RENSSELAER POLYTECH INST	12,054	9,049	1,705	184	424	344	22	29	297
36 GEORGETOWN UNIVERSITY	11,630	0	769	0	0	8,892	0	262	1,707
37 TUFTS UNIVERSITY	11,495I	692I	753I	0	34I	9,634I	229I	153I	0
38 TULANE UNIVERSITY	11,221	325	88	0	118	10,398	5	287	0
39 UNIVERSITY OF NOTRE DAME	11,177	4,079	5,104	1	152	886	35	0	120
40 SYRACUSE UNIVERSITY	9,904	2,812	1,838	21	476	2,184	228	2,007	338E
TOTAL, 1ST 40 INSTS.	1,940,848	337,251	292,953	134,864	118,006	963,297	26,619	47,064	20,794
41 HOWARD UNIVERSITY	8,671	871	2,163	132	57	5,254	30	164	0
42 MEDICAL COLLEGE OF WIS	8,136I	0	0	0	0	8,136I	0	0	0
43 RICE UNIVERSITY	7,946I	1,385I	3,906I	285I	467I	1,785I	92I	26I	0
44 ALBANY MEDICAL COLLEGE	7,621I	0	0	0	0	7,621I	0	0	0
45 RUSH UNIVERSITY	7,137	0	0	0	0	6,851	286	0	0
46 NEW YORK MEDICAL COLLEGE	6,674	0	0	0	0	6,674	0	0	0
47 LEHIGH UNIVERSITY	6,383	3,932	1,779	139	221	207	13	89	3
48 THOMAS JEFFERSON UNIV	6,068	0	0	0	0	6,068	0	0	0
49 HAHNEMANN UNIVERSITY	5,929I	0	0	0	0	5,673I	256I	0	0
50 WAKE FOREST UNIVERSITY	5,640I	0	55I	0	0	5,413I	0	172I	0I
TOTAL, 1ST 50 INSTS.	2,011,053	343,439	300,856	135,420	118,751	1,016,979	27,296	47,515	20,797

SEE FOOTNOTES AT END OF TABLE.

TABLE B-39. -- FEDERALLY FINANCED R&D EXPENDITURES AT PRIVATE UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51 NORTHEASTERN UNIVERSITY	5,629I	1,508I	1,742I	30I	127I	764I	585I	899I	14I
52 ST LOUIS UNIVERSITY	5,595	47I	42I	658I	0	4,495I	126I	227I	0
53 BOSTON COLLEGE	4,871	0	2,675	48	1,756	146	21	225	0
54 DREXEL UNIVERSITY	4,291	2,494	1,219	0	339	239	0	0	0
55 POLYTECHNIC INST OF N Y	4,113	2,779E	1,334E	0	0	0	0	0	0
56 ILLINOIS INST OF TECH	3,891	1,675	1,203	450	274	224	65	0	0
57 WESLEYAN UNIVERSITY	3,760E	0	1,188I	7I	23I	2,058I	334I	150I	0
58 THE MEDICAL COL OF PENNA	3,371	0	0	0	0	3,371	0	0	0
59 STEVENS INSTITUTE OF TECH	2,905	2,536	307	18	44	0	0	0	0
60 CATHOLIC UNIV OF AMERICA	2,899	683	1,523	0	71	393	195	34	0
TOTAL, 1ST 60 INSTS.	2,052,378	355,161	312,089	136,631	121,385	1,028,669	28,622	49,010	20,811
61 LOYOLA UNIV - CHICAGO	2,793	0	38	0	0	2,199	0	556	0
62 CLARKSON COLLEGE OF TECH	2,769	1,427	1,134	0	208	0	0	0	0
63 BRIGHAM YOUNG UNIVERSITY	2,479	686	1,073	73	18	459	0	170	0
64 GALLAUDET COLLEGE	2,115	0	0	0	0	885	332	898	0
65 OREGON GRADUATE CENTER	2,014I	0	1,428I	586I	0I	0	0	0	0
66 CLARK UNIVERSITY	2,608I	0	435I	1,250I	28I	81I	197I	17I	0
67 ATLANTA UNIVERSITY	1,995E	0	1,106	0	110	533	0	246	0
68 LOMA LINDA UNIVERSITY	1,961I	0	0	0	374I	1,388I	199I	0	0
69 MEHARRY MEDICAL COLLEGE	1,803	0	0	0	0	1,803I	0	0	0
70 TEXAS COL OF OSTEO MED	1,620	0	0	0	0	1,620	0	0	0
TOTAL, 1ST 70 INSTS.	2,073,935	357,274	317,303	138,540	122,123	1,037,637	29,350	50,897	20,811
71 WORCESTER POLY INSTITUTE	1,494	1,011	218	0	19	212	0	34	0
72 SOUTHERN METHODIST UNIV	1,454	347	1	407	310	80	3	306	0
73 WENTWORTH INST OF TECH	1,327	0	0	1,327	0	0	0	0	0
74 U HLTH SCI/CHCGO MED SCH	1,294I	0	0	0	0	1,294I	0	0	0
75 FORDHAM UNIVERSITY	1,043	0	157	0	50	60	28	705	43
76 MARQUETTE UNIVERSITY	1,006	127	231	0	28	604	0	9	7
77 TUSKEGEE INSTITUTE	998E	263E	0	0	0	735E	0	0	0
78 MANHATTAN COLLEGE	972	917	1	0	0	29	25	0	0
79 POMONA COLLEGE	912I	0	322I	0	80I	353I	79I	78I	0
80 CREIGHTON UNIVERSITY	892	0	0	0	0	892	0	0	0
TOTAL, 1ST 80 INSTS.	2,085,327	359,939	318,233	140,274	122,610	1,041,896	29,485	52,029	20,861
81 UNIVERSITY OF SANTA CLARA	855	573	62	37	0	133	50	0	0
82 WELLESLEY COLLEGE	844	0	24	0	9	91	21	699	0
83 THE WRIGHT INSTITUTE	837I	0	0	0	0	0	837I	0	0
84 FAIRLEIGH DICKINSON UNIV	768	0	83	509	0	128	5	43	0
85 AMERICAN UNIVERSITY	760	0	444	0	116	75	94	31	0
86 AMHERST COLLEGE	723	0	367	3	4	324	0	25	0
87 EMMANUEL COLLEGE	722I	0	687I	35I	0	0	0	0	0
88 SETON HALL UNIVERSITY	710I	0	234I	0	0I	0I	476I	0I	0
89 UNIVERSITY OF TULSA	702	399	57	126	0	6	0	120	0
90 UNIVERSITY OF THE PACIFIC	693I	0	3I	0I	0	609I	5I	76I	0I
TOTAL, 1ST 90 INSTS.	2,092,941	360,911	320,194	140,984	122,739	1,043,256	30,973	53,023	20,861
91 NOVA UNIVERSITY	646	0	0	542	9	65	30	0	0
92 TEXAS CHRISTIAN UNIV	642	0	238	0	0	76	74	254	0
93 FLORIDA INST OF TECH	604	2	11	235	0	325	0	0	31
94 TRINITY UNIVERSITY	594I	0	0I	469I	0	72I	53I	0	0
95 NE OHIO UNIVS MED SCHOOL	568	0	0	0	0	568	0	0	0
96 INSTITUTE PAPER CHEMISTRY	565	527	38	0	0	0	0	0	0
97 BRYN MAWR COLLEGE	560I	0	62I	94I	19I	1I	141I	243I	0
98 CATHOLIC UNIV OF P R	551	0	391	0	0	0	0	0	160
99 EASTERN VA MEDICAL SCHOOL	544	0	0	0	0	544	0	0	0
100 REGIS COLLEGE	447	0	376	0	71	0	0	0	0
TOTAL, 1ST 100 INSTS.	2,098,662	361,440	321,310	142,324	122,838	1,044,907	31,271	53,520	21,052
TOTAL, ALL OTHER INSTS.	10,654	1,429	2,475	280	702	3,740	884	1,056	88

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DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-40. — TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT HISTORICALLY BLACK COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

	INSTITUTIONS RANKED BY TOTAL R&D EXPENDITURES (1983)	TOTAL				FEDERALLY FINANCED			
		1983	1982	1981	1980	1983	1982	1981	1980
	TOTAL, ALL INSTITUTIONS	61,685	57,311	49,391	40,851	46,399	43,672	39,558	33,792
1	TENNESSEE STATE UNIV	11,798I	11,372	10,329	670E	6,807I	6,830	6,198	0
2	HOWARD UNIVERSITY	10,999	11,244	9,515	11,658	8,671	9,178	7,332	8,172
3	NC AG & TECH STATE UNIV	4,745	2,787	3,696	4,969	4,488	2,641	3,628	4,888E
4	PRAIRIE VIEW A & M UNIV	4,232I	4,079	1,561I	1,381E	3,768I	3,780	1,492I	1,349E
5	FLORIDA A & M UNIVERSITY	4,227I	4,074	2,520	2,739I	1,241I	1,245	2,126	2,548I
6	UNIV OF ARK PINE BLUFF	3,744I	3,199	3,783	3,564	1,763I	1,502	2,290	2,106
7	SOUTHERN U & A&M COLLEGE	2,401	2,387	1,929	1,875	2,401	2,361	1,929	1,875
8	ATLANTA UNIVERSITY	2,195	1,450	1,820	1,797	1,995E	1,174E	1,474	1,548
9	MEHARRY MEDICAL COLLEGE	2,157	2,247	1,937E	1,682E	1,803	1,922	1,592E	1,215E
10	VIRGINIA STATE UNIVERSITY	2,109I	2,033I	1,877	1,913	1,862I	1,868I	1,877	1,904
	TOTAL, 1ST 10 INSTS.	48,567	44,372	38,927	32,248	34,799	32,901	29,938	25,605
11	ALABAMA A & M UNIVERSITY	2,057	1,861	1,601	1,213	2,057	1,861	1,601	1,308
12	SOUTH CAROLINA ST COLLEG	1,478I	1,263	521I	508E	1,473I	1,295	518I	508E
13	U OF MD EASTERN SHORE	1,376E	1,376I	1,376	1,024I	1,032E	982I	982	1,024I
14	JACKSON STATE UNIVERSITY	1,266I	1,220I	1,126I	996	897I	900I	904I	818
15	KENTUCKY STATE UNIVERSITY	1,101I	941I	941	398I	1,101I	941I	941	398I
16	ALCORN STATE UNIVERSITY	1,006I	860I	860I	839I	1,004I	855I	855I	839I
17	TUSKEGEE INSTITUTE	998E	973E	927	631	998E	973E	927	615
18	UNIVERSITY OF D C	910	1,058	428	393	505	882	428	393
19	COL OF THE VIRGIN ISLANDS	832I	711I	711I	663I	714I	608I	608I	596I
20	NORFOLK STATE UNIVERSITY	696I	595I	595I	580	694I	591I	591I	580
	TOTAL, 1ST 20 INSTS.	60,287	55,730	48,013	39,623	45,274	42,349	38,293	32,684
21	TEXAS SOUTHERN UNIV	497	643	356	362I	396	529	321	303I
22	FISK UNIVERSITY	226I	220	219I	197I	194I	197	219I	197I
23	NORTH CAROLINA CNTRL UNIV	201I	194I	179I	158E	110I	110I	111I	100E
24	GRAMBLING STATE UNIV	174I	168I	155I	137	150I	150I	151I	137
25	MORGAN STATE UNIVERSITY	167I	161I	149I	132I	142I	142I	143I	129I
26	ALBANY STATE COLLEGE	133	195	170	9	133	195	170	9
27	MOREHOUSE SCHOOL OF MED	-	-	-	-	-	-	-	-
28	DILLARD UNIVERSITY	0	0	0	3	0	0	0	3
29	MISS VALLEY STATE UNIV	0	0	0	0E	0	0	0	0
30	LINCOLN UNIVERSITY (PA)	0	0	150	220	0	0	150	220
	TOTAL, 1ST 30 INSTS.	61,685	57,311	49,391	40,851	46,399	43,672	39,558	33,792

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-41. — R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	1,100,90.	1,024,323	959,989	864,040	735,327	697,132	661,578	594,551
1 MASS INST OF TECHNOLOGY	82,467	84,109	73,429	69,576	64,330	65,928	57,654	57,399
2 JOHNS HOPKINS UNIVERSITY	81,360E	76,465	63,951	55,865	79,719E	74,637	63,014	54,772
3 GEORGIA INSTITUTE OF TECH	59,876	50,454	45,068	39,112	35,766	27,298	24,994	22,663
4 STANFORD UNIVERSITY	50,218	48,083	41,195	33,327	43,389	38,119	36,842	29,473
5 PENNSYLVANIA STATE UNIV	32,989	30,258	28,349	25,411	24,742	22,481	20,658	18,892
6 TEXAS A & M UNIVERSITY	30,719	22,770	24,026	19,844	15,815	8,355	10,784	8,698
7 UNIV OF ILL URBANA	25,729	24,933	23,538	20,385	18,753	18,707	17,631	14,696
8 UNIV OF CAL BERKELEY 1/	25,208	21,289	20,796	20,458	18,170	15,460	15,856	15,975
9 UNIV OF SOUTHERN CAL	25,106	22,829	18,664	20,624	19,104	17,916	13,995	16,074
10 CORNELL UNIVERSITY	23,141E	22,583E	18,744	14,274	17,819	17,291	15,338	11,869
TOTAL, 1ST 10 INSTS.	436,813	400,773	357,760	318,876	337,607	306,192	276,766	250,511
11 PURDUE UNIVERSITY	22,403	20,741	23,915	19,132	13,688	14,452	15,783	14,096
12 UNIVERSITY OF MICHIGAN	19,817	17,367	17,600	15,209	13,279	10,967	11,562	9,630
13 NEW MEXICO STATE UNIV	18,829	15,121	23,867	21,510	16,836	13,949	21,063	18,945
14 UNIV OF WIS-MADISON	17,613	15,888	13,205	11,267	10,235	9,396	7,574	6,515
15 REWSSELAER POLYTECH INST	17,329	14,282	13,312	10,556	9,049	8,276	7,854	6,545
16 OHIO STATE UNIVERSITY	15,208E	15,712	13,022	11,569	8,546E	8,987	7,720	6,858
17 UNIV OF TEXAS AT AUSTIN	14,950	13,507	12,846	10,362	6,682	6,451	6,830	5,121
18 UNIV OF CAL LOS ANGELES 1/	14,733	11,500	9,793	7,528	11,408	9,835	8,675	6,810
19 UNIVERSITY OF FLORIDA	14,544	14,601	13,930	15,873E	5,851	6,370	6,918	5,296E
20 UNIVERSITY OF MINNESOTA	13,957	12,782	12,001	9,285	6,412	6,817	6,882	5,338
TOTAL, 1ST 20 INSTS.	606,196	552,274	511,251	451,167	439,593	401,692	377,627	335,665
21 N C STATE UNIV AT RALEIGH	13,812	11,376I	10,167	8,616	5,525	5,572I	5,185	4,137
22 UNIVERSITY OF DAYTON	12,728	10,944	12,293I	11,908	10,610	9,541	11,415I	10,792
23 IOWA ST U OF SCI & TECH	12,402	10,696	9,537	9,101	3,288	3,250	3,434	3,270
24 VA POLYTECH INST & ST U	12,241	11,691	11,016	9,374	7,753	6,658	6,451	5,259
25 CASE WESTERN RESERVE UNIV	10,865	11,103	11,016	10,048	8,895	8,918	8,766	7,804
26 UNIVERSITY OF ROCHESTER	10,240	12,297	13,880	17,285	7,918	8,932	7,608	8,889
27 CARNEGIE-MELLON UNIV	10,086	8,794	8,285	6,707	7,873	7,118	6,854	5,150
28 CALIFORNIA INST OF TECH	10,075	8,999	9,976	9,135	8,695	8,095	8,425	7,738
29 UNIVERSITY OF NEW MEXICO	8,982I	8,430	9,201	6,912	7,368I	7,016	6,562	6,208
30 OKLAHOMA STATE UNIVERSITY	8,733I	8,172I	6,600I	5,891I	4,282I	4,077I	2,846I	4,121I
TOTAL, 1ST 30 INSTS.	716,360	653,776	613,222	546,144	511,800	471,269	445,173	399,033
31 UNIVERSITY OF KENTUCKY	8,574	7,450	7,223	5,683	2,511	2,749	2,713	2,348
32 PRINCETON UNIVERSITY	8,413	8,253	7,698	6,963	5,784	6,161	6,034	5,411
33 COLORADO STATE UNIVERSITY	8,229	8,235	7,317	10,765	4,489	5,085	4,561	7,952
34 UNIVERSITY OF WASHINGTON	8,203	7,759	6,212	5,445	5,756	5,519	4,815	4,258
35 UNIVERSITY OF UTAH	7,93?	8,543	9,045	8,311	5,873	6,100	6,943	6,589
36 NORTHWESTERN UNIVERSITY	7,7?.	6,713	6,323	5,145	6,388	5,573	5,356	4,575
37 LEHIGH UNIVERSITY	7,717	6,110	5,039	4,488	3,932	3,592	2,874	2,747
38 UNIVERSITY OF OKLAHOMA	7,269	4,230	2,279	2,640	2,658	2,162	1,5??	1,277
39 ARIZONA STATE UNIVERSITY	7,142	3,113	2,363	1,192	2,542	1,808	1,570	806
40 COLUMBIA UNIV MAIN DIV	6,942	6,350	5,111	7,719	5,482	4,642	3,977	4,079
TOTAL, 1ST 40 INSTS.	794,577	720,532	671,832	604,495	557,215	514,660	485,572	439,075
41 UNIVERSITY OF VIRGINIA	6,554	6,271	5,686	5,629	4,906	4,879	4,987	5,085
42 UNIVERSITY OF DENVER	6,509I	6,171	5,605I	4,784	5,050I	4,805	4,680I	4,066
43 UNIVERSITY OF CONNECTICUT	6,500	5,591	5,510	4,187	3,485	3,048	3,224	2,503
44 UNIV OF PENNSYLVANIA	6,337	6,554	4,768	4,441	4,883	4,679	3,702	3,382
45 UNIVERSITY OF ARIZONA	6,287	6,440	6,979	6,208	3,812	3,829	3,649	3,411
46 LOUISIANA STATE UNIV	6,276	6,300	5,864	4,365	1,813	1,718	1,415	1,023
47 UNIV OF CENTRAL FLORIDA	6,119	4,304	3,665E	4,274	1,879	1,064	1,310E	1,986
48 UNIV OF MD COLLEGE PARK	5,908E	4,151	4,683	4,083	4,277	2,950	2,419	2,292
49 MICHIGAN TECH UNIVERSITY	5,742	5,061	4,847	4,850	2,264	2,155	2,089	2,015
50 UNIV OF MISSOURI ROLLA	5,716	5,237	5,243	4,517	2,241	2,110	2,616	1,984
TOTAL, 1ST 50 INSTS.	856,525	776,612	724,682	651,833	591,625	545,897	515,663	466,822

SEE FOOTNOTES AT END OF TABLE.

TABLE B-41. — R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 UNIVERSITY OF NOTRE DAME	5,470	4,535	5,327	2,412	4,879	3,963	4,895	2,067
52 WOODS HOLE OCNGRPHIC INST	5,445	4,778	4,822	3,526	5,048	3,980	4,166	3,241
53 TEXAS TECH UNIVERSITY	5,170	5,509	6,153	5,685	2,207	2,747	3,420	3,457
54 N MEX INST MINING & TECH	5,141I	4,767	5,106	5,076	3,002I	2,858	3,140	3,307E
55 SYRACUSE UNIVERSITY	5,120	4,890	4,161	4,373	2,812	3,021	2,391	3,117
56 UNIVERSITY OF DELAWARE	4,814E	4,493	4,092	4,610	2,051	2,236	2,115	2,554
57 UNIVERSITY OF IOWA	4,763	5,698	4,253	3,123	2,321E	2,385	2,053	1,608
58 BROWN UNIVERSITY	4,457	4,040	3,926	3,800	3,863	3,284	3,557	3,100
59 UNIV OF RHODE ISLAND	4,396I	3,950I	3,229I	2,820I	2,184I	2,080I	2,196I	1,565I
60 GEORGE WASHINGTON UNIV	4,371	3,634	3,147	3,235	4,124	3,459	2,993	3,087
TOTAL, 1ST 60 INSTS.	905,672	822,906	768,898	690,493	624,316	575,910	546,589	493,925
61 AUBURN UNIVERSITY	4,174	2,008	1,762	2,838	1,567	1,017	1,405	1,475
62 CLEMSON UNIVERSITY	4,138	6,326	5,235	4,631	2,439	3,003	2,054	1,485
63 RUTGERS THE ST UNIV OF NJ	4,090	3,079	2,526	2,317	1,849	1,881	1,578	1,166
64 MISSISSIPPI STATE UNIV	3,852	4,701	3,658	3,272	2,500	2,664	2,569	2,506
65 UNIVERSITY OF COLORADO	3,813	3,307	2,949	2,273	2,928	2,469	2,242	1,632
66 STEVENS INSTITUTE OF TECH	3,745	3,783	2,901	2,806	2,536	2,517	1,857	1,967
67 YALE UNIVERSITY	3,684	3,824	3,492	2,517	3,385	3,541	3,232E	2,420
68 POLYTECHNIC INST OF N Y	3,642	3,657	3,814	5,671E	2,779E	2,807E	3,398E	3,790E
69 OREGON STATE UNIVERSITY	3,564	3,442	3,219	2,881	2,094	1,809	1,664	1,633
70 U OF HOUSTON UNIV PARK	3,595	4,241	4,099	5,587	2,135	1,829	2,573	2,191
TOTAL, 1ST 70 INSTS.	943,931	861,274	802,553	725,286	648,528	599,447	569,161	514,190
71 DREXEL UNIVERSITY	3,539	2,759	2,697	2,541	2,494	1,907	1,937	1,867
72 WORCESTER POLY INSTITUTE	3,500	3,205	2,567	2,794	1,011	1,076	1,228	1,257
73 U TENNESSEE KNOXVILLE	3,439I	3,192	5,418I	4,266I	2,696I	2,566	3,677I	2,687I
74 UNIV OF MASS AT AMHERST	3,321	3,318	2,590	1,901	1,926	1,471	1,502	1,126
75 UNIV OF NEBRASKA-LINCOLN	3,278E	3,553	2,642	2,258	910E	1,285	820	594
76 UNIV OF ILL CHICAGO 2/	3,228	3,138	2,206	1,927	1,935	2,083	1,750	1,523
77 UNIVERSITY OF CINCINNATI	3,218	2,737	2,702	2,483	2,372	2,165	1,772	1,468
78 UNIVERSITY OF PITTSBURGH	3,198	3,841	4,087	3,807	2,476	2,884	3,173	2,675
79 WASHINGTON STATE UNIV	3,160	3,601	5,059	3,560	1,884	1,832	2,403	1,626
80 KANS ST U - AG & APP SCI	3,097	3,417	3,646	3,193	1,138	1,458	1,511	1,347
TOTAL, 1ST 80 INSTS.	976,909	894,035	836,167	754,016	667,370	618,174	588,934	530,358
81 SUNY AT BUFFALO	3,093	3,282	3,578	2,690	1,700	2,137	1,909	1,690
82 COLORADO SCHOOL OF MINES	3,025	3,272	2,717	2,434	2,073	2,723	2,394	2,112
83 MICHIGAN STATE UNIVERSITY	2,964	2,754	2,606	2,363	1,763	1,619	1,266	1,033
84 INSTITUTE PAPER CHEMISTRY	2,923	3,206	3,258	1,686E	527	1,167	1,224	0
85 UNIV OF MISSOURI COLUMBIA	2,888	2,092	1,967	1,649	880	836	802	695
86 UNIV OF ARK FAYETTEVILLE	2,880	3,246	5,693E	4,108E	871	1,054	760E	354
87 UNIV OF MAINE ORONO	2,865	1,931	1,818	1,230	1,121	574	888	490
88 UNIV OF CAL DAVIS 1/	2,822	3,037	2,608	3,962	2,078	2,337	2,061	2,022
89 WASHINGTON UNIVERSITY	2,682	2,838	3,065	2,902	2,249	2,379	2,680	2,448
90 WEST VIRGINIA UNIVERSITY	2,681	4,642	4,529	4,877	1,180	2,408	2,377	2,634
TOTAL, 1ST 90 INSTS.	1,005,732	924,335	868,006	781,917	681,812	635,408	605,295	543,836
91 SUNY AT STONY BROOK	2,590	2,331	1,711	1,435	1,797	1,591	1,322	1,137
92 UNIV ALABAMA HUNTSVILLE	2,485	803	1,011	1,201	1,458	757	951	958
93 WAYNE STATE UNIVERSITY	2,345	2,300	2,386	2,724	1,164	1,119	996	1,023
94 UNIVERSITY OF GEORGIA	2,320	2,136	1,688	1,517	365	370	163	169
95 ILLINOIS INST OF TECH	2,289	2,431	2,340	1,149I	1,675	1,826	1,916	768I
96 UNIVERSITY OF KANSAS	2,220I	2,069I	2,333I	2,088I	1,536I	1,462I	2,091I	1,816I
97 OHIO UNIVERSITY	2,219	2,596	1,975	1,521	695	767	1,007	728
98 DARTMOUTH COLLEGE	2,209	1,531	1,749	1,124	1,476	1,251	1,258	834
99 CLARKSON COLLEGE OF TECH	2,034	1,550	2,127	1,950	1,427	1,105	1,765	1,521
100 UNIV OF CAL SANTA BARBARA 1/	1,969	1,483	1,174	881	1,412	1,014	994	735
TOTAL, 1ST 100 INSTS.	1,028,412	943,565	886,500	797,507	694,817	646,670	617,758	553,525
TOTAL, ALL OTHER INSTS.	72,490	80,758	73,489	66,533	40,510	90,482	43,820	41,026

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-42. — R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING		ENGINEERING FIELDS					
	TOTAL	AERO/ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECH-ANICAL	OTHER
TOTAL, ALL INSTITUTIONS	1,100,902	49,011	88,951	106,902	257,300	147,542	435,196
1 MASS INST OF TECHNOLOGY	82,467	9,455	5,113	6,549	22,958	11,985	26,407
2 JOHNS HOPKINS UNIVERSITY	81,360E	8,189E	1,485E	750	29,257E	16,718E	28,961E
3 GEORGIA INSTITUTE OF TECH	59,876	2,982	2,923	13,190	26,378	5,174	9,229
4 STANFORD UNIVERSITY	50,318	3,859	3,661	3,114	21,403	4,510	13,671
5 PENNSYLVANIA STATE UNIV	32,989	508	1,992	599	1,685	1,637	26,568
6 TEXAS A & M UNIVERSITY	30,719	1,179	524	1,678	713	1,495	25,130
7 UNIV OF ILL URBANA	25,729	577	810	2,801	4,120	2,146	15,275
8 UNIV OF CAL BERKELEY 1/	25,208	262	1,125	5,250	11,235	2,101	5,235
9 UNIV OF SOUTHERN CAL	25,106	3,850	186	741	4,604	312	15,412
10 CORNELL UNIVERSITY	23,141E	670E	926E	230E	5,553E	62E	15,701E
TOTAL, 1ST 10 INSTS.	436,813	31,531	18,345	34,902	123,905	46,141	181,989
11 PURDUE UNIVERSITY	22,403	1,422	1,076	2,452	4,300	3,393	9,760
12 UNIVERSITY OF MICHIGAN	19,817	1,029	944	2,228	3,711	4,792	7,203
13 NEW MEXICO STATE UNIV	18,829	4,143	315	143	13,644	257	327
14 UNIV OF WIS-MADISON	17,613	0	1,988	683	3,230	1,378	10,334
15 RENSSELAER POLYTECH INST	17,329	0	957	880	4,619	3,442	7,431
16 OHIO STATE UNIVERSITY	15,208E	585E	342E	525E	4,703E	1,146E	7,907E
17 UNIV OF TEXAS AT AUSTIN	14,950	1,404	2,189	3,804	3,627	2,057	1,869
18 UNIV OF CAL LOS ANGELES 1/	14,733	0	1,781	225	7,777	1,382	3,568
19 UNIVERSITY OF FLORIDA	14,544	931	906	2,587	2,595	1,633	5,932
20 UNIVERSITY OF MINNESOTA	13,957	1,018	2,583	990	1,286	2,722	5,358
TOTAL, 1ST 20 INSTS.	606,196	42,063	31,336	49,419	173,357	68,343	241,678
21 N C STATE UNIV AT RALEIGH	13,812	961	2,401	601	3,482	1,080	5,287
22 UNIVERSITY OF DAYTON	12,728	3,209	0	0	230	1,141	8,148
23 IOWA ST U OF SCI & TECH	12,402	771	1,017	2,556	1,630	2,231	4,197
24 VA POLYTECH INST & ST U	12,241	1,077	595	1,314	1,649	3,572	4,034
25 CASE WESTERN RESERVE UNIV	10,865	0	811	482	1,191	1,566	6,815
26 UNIVERSITY OF ROCHESTER	10,240	0	369	0	866	7,404	1,601
27 CARNEGIE-MELLON UNIV	10,086	0	552	732	3,015	1,808	3,979
28 CALIFORNIA INST OF TECH	10,075	717I	767I	789I	2,543I	2,088I	3,171I
29 UNIVERSITY OF NEW MEXICO	8,982I	0	231	232I	307I	558I	7,862I
30 OKLAHOMA STATE UNIVERSITY	8,733I	392I	650I	980I	1,540I	1,232I	3,939I
TOTAL, 1ST 30 INSTS.	716,360	49,190	38,521	57,105	189,810	91,023	290,711
31 UNIVERSITY OF KENTUCKY	8,574	346I	644I	952I	1,457I	1,195I	3,980I
32 PRINCETON UNIVERSITY	8,413	4,404	1,322	1,868	786	0	33
33 COLORADO STATE UNIVERSITY	8,229	0	9	3,516	1,361	329	3,014
34 UNIVERSITY OF WASHINGTON	8,203	1,307	1,079	2,297	946	1,024	1,550
35 UNIVERSITY OF UTAH	7,931	0	364	477	1,458	500	5,132
36 NORTHWESTERN UNIVERSITY	7,797	0	1,053	1,548	969	849	3,378
37 LEHIGH UNIVERSITY	7,717	0	117	1,298	368	1,314	4,660
38 UNIVERSITY OF OKLAHOMA	7,269	809	1,757	3,314	1,131	0	258
39 ARIZONA STATE UNIVERSITY	7,142	0	1,116	411	809	1,441	3,363
40 COLUMBIA UNIV MAIN DIV	6,942	0	1,519	714	1,179	383	3,147
TOTAL, 1ST 40 INSTS.	794,577	56,056	47,501	73,460	200,274	98,060	319,226
41 UNIVERSITY OF VIRGINIA	6,554	0	164	129	994	580	4,687
42 UNIVERSITY OF DENVER	6,509I	0	803I	0	2,817I	2,025I	864I
43 UNIVERSITY OF CONNECTICUT	6,500	0	975	495	910	975	3,185
44 UNIV OF PENNSYLVANIA	6,337	0	783	247	1,167	555	3,585
45 UNIVERSITY OF ARIZONA	6,287	0	352	466	1,410	0	4,059
46 LOUISIANA STATE UNIV	6,276	0	1,433	956	688	812	2,387
47 UNIV OF CENTRAL FLORIDA	6,119	0	0	186	297	84	5,552
48 UNIV OF MD COLLEGE PARK	5,908E	557	788	1,794	1,679	950	140
49 MICHIGAN TECH UNIVERSITY	5,742	0	152	1,386	306	1,057	2,841
50 UNIV OF MISSOURI ROLLA	5,716	0	231	445	552	607	3,881
TOTAL, 1ST 50 INSTS.	856,525	56,613	53,182	79,524	211,094	105,705	350,407

SEE FOOTNOTES AT END OF TABLE.

TABLE B-42. — R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING		ENGINEERING FIELDS					
	TOTAL	AERO/ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECH-ANICAL	OTHER
51 UNIVERSITY OF NOTRE DAME	5,470	508E	1,584E	329E	1,375E	0	1,674E
52 WOODS HOLE OCNGRPHIC INST	5,445	389I	417I	429I	1,396I	1,095I	1,719I
53 TEXAS TECH UNIVERSITY	5,170	226I	389I	577I	901I	724I	2,353I
54 N MEX INST MINING & TECH	5,141I	0	0	0	0	2,894I	2,247I
55 SYRACUSE UNIVERSITY	5,120	0	1,797	451	1,450	204	1,218
56 UNIVERSITY OF DELAWARE	4,814E	0	1,922	460	699E	1,407	326E
57 UNIVERSITY OF IOWA	4,763	218I	349I	531I	823I	674I	2,168I
58 BROWN UNIVERSITY	4,457	318I	340I	350I	1,126I	921I	1,402I
59 UNIV OF RHODE ISLAND	4,396I	197I	327I	494I	777I	619I	1,982I
60 GEORGE WASHINGTON UNIV	4,371	1,242	3	220	162	219	2,525
TOTAL, 1ST 60 INSTS.	908,672	99,711	60,310	83,365	219,813	114,462	368,011
61 AUBURN UNIVERSITY	4,174	226	1,035	268	857	415	1,373
62 CLEMSON UNIVERSITY	4,138	0	193	865	1,323	508	1,249
63 RUTGERS THE ST UNIV OF NJ	4,090	0	241	143	306	362	3,038
64 MISSISSIPPI STATE UNIV	3,852	955	85	59	517	170	2,066
65 UNIVERSITY OF COLORADO	3,813	320	541	904	1,703	320	25
66 STEVENS INSTITUTE OF TECH	3,746	0	0	0	184	323	3,238E
67 YALE UNIVERSITY	3,686	0	1,032	0	332	0	2,322
68 POLYTECHNIC INST OF N Y	3,642	0	192	208	2,035	444	763
69 OREGON STATE UNIVERSITY	3,564	0	195	1,040	409	1,037	883
70 U OF HOUSTON UNIV PARK	3,595	0	712	683	497	922	741
TOTAL, 1ST 70 INSTS.	944,931	61,212	64,536	87,535	227,976	118,963	383,709
71 DREXEL UNIVERSITY	3,539	0	52	658	504	1,295	1,070
72 WORCESTER POLY INSTITUTE	3,500	0	660	67	224	2,418	131
73 U TENNESSEE KNOXVILLE	3,439I	0	528I	523I	817I	255I	1,316I
74 UNIV OF MASS AT AMHERST	3,321	0	648	458	1,033	643	539
75 UNIV OF NEBRASKA-LINCOLN	3,278E	0	74E	292E	354E	343E	2,215E
76 UNIV OF ILL CHICAGO 2/	3,228	0	311	1,158	1,017	123	619
77 UNIVERSITY OF CINCINNATI	3,218	528E	1,241E	160E	651E	258E	380E
78 UNIVERSITY OF PITTSBURGH	3,198	0	897	435	174	190	1,502
79 WASHINGTON STATE UNIV	3,160	0	1,274	701	316	361	508
80 KANS ST U - AG & APP SCI	3,097	0	420	105	396	98	2,078
TOTAL, 1ST 80 INSTS.	976,909	61,740	70,441	92,092	233,462	124,907	394,067
81 SUNY AT BUFFALO	3,093	0	544	484	1,205	426	434
82 COLORADO SCHOOL OF MINES	3,025	0	658	0	0	114	2,253
83 MICHIGAN STATE UNIVERSITY	2,964	0	268	266	904	681	1,245
84 INSTITUTE PAPER CHEMISTRY	2,923	0	1,518	0	0	951	454
85 UNIV OF MISSOURI COLUMBIA	2,888	0	63	272	378	67	2,108
86 UNIV OF ARK FAYETTEVILLE	2,880	0	615	284	445	505	1,031
87 UNIV OF MAINE ORONO	2,865	0	1,973	218	337	167	170
88 UNIV OF CAL DAVIS 1/	2,822	0	229	820	488	815	470
89 WASHINGTON UNIVERSITY	2,682	0	164	96	580	669	1,173
90 WEST VIRGINIA UNIVERSITY	2,681	0	50	105	118	163	2,245
TOTAL, 1ST 90 INSTS.	1,005,732	61,740	76,723	94,637	237,517	129,465	405,650
91 SUNY AT STONY BROOK	2,990	0	0	0	295	843	1,452
92 UNIV ALABAMA HUNTSVILLE	2,485	0	192	49	777	1,092	375
93 WAYNE STATE UNIVERSITY	2,345	0	181	15	500	776	873
94 UNIVERSITY OF GEORGIA	2,320	0	0	0	0	0	2,320I
95 ILLINOIS INST OF TECH	2,289	0	629	40	319	995	306
96 UNIVERSITY OF KANSAS	2,220I	112I	164I	249I	409I	315I	971I
97 OHIO UNIVERSITY	2,219	0	430	87	1,223	107	372
98 DARTMOUTH COLLEGE	2,209	195I	165I	175I	527I	497I	689I
99 CLARKSON COLLEGE OF TECH	2,034	0	905	556	307	266	0
100 UNIV OF CAL SANTA BARBARA 1/	1,969	0	941	0	665	363	0
TOTAL, 1ST 100 INSTS.	1,028,412	62,007	80,331	95,808	242,539	134,719	413,008
TOTAL, ALL OTHER INSTS.	72,490	3,004	8,620	11,094	14,761	12,823	22,188

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-43. — FEDERALLY FINANCED R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	ENGINEERING FIELDS						
	TOTAL	AERO/ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECH-ANICAL	OTHER
TOTAL, ALL INSTITUTIONS	735,327	52,173	51,521	57,620	151,968	100,439	281,606
1 JOHNS HOPKINS UNIVERSITY	79,719E	8,189E	1,439E	620	24,757E	16,542E	28,172E
2 MASS INST OF TECHNOLOGY	64,330	7,473	3,000	4,721	19,297	7,436	22,403
3 STANFORD UNIVERSITY	43,389	3,500E	3,129	2,404	18,984	3,741	11,631
4 GEORGIA INSTITUTE OF TECH	35,766	1,781	1,746	7,879	15,756	3,091	5,513
5 PENNSYLVANIA STATE UNIV	24,742	499	567	127	1,379	1,320	20,850
6 UNIV OF SOUTHERN CAL	19,104	2,943	114	436	3,431	213	11,967
7 UNIV OF ILL URBANA	18,753	334	394	1,800	3,123	1,322	11,780
8 UNIV OF CAL BERKELEY 1/	18,170	261	774	2,214	8,926	1,891	4,104
9 CORNELL UNIVERSITY	17,819	560E	647E	131E	3,862E	27E	12,592E
10 NEW MEXICO STATE UNIV	16,836	4,143	276	40	12,120	118	139
TOTAL, 1ST 10 INSTS.	338,628	29,683	12,086	20,372	111,635	35,701	129,151
11 TEXAS A & M UNIVERSITY	15,815	935	121	732	187	1,181	12,659
12 PURDUE UNIVERSITY	13,688	1,326	635	1,232	3,205	2,175	5,115
13 UNIVERSITY OF MICHIGAN	13,279	748	587	1,620	2,948	2,565	4,811
14 UNIV OF CAL LOS ANGELES 1/	11,408	0	1,468	77	6,846	1,128	1,889
15 UNIVERSITY OF DAYTON	10,610	2,840	0	0	204	1,010	6,556
16 UNIV OF WIS-MADISON	10,235	0	1,273	250	2,042	695	5,975
17 RENSSELAER POLYTECH INST	9,049	0	500	460	2,412	1,797	3,880
18 CASE WESTERN RESERVE UNIV	8,895	0	686	363	1,043	1,426	5,377
19 CALIFORNIA INST OF TECH	8,695	624I	677I	685I	2,268I	1,684I	2,757I
20 OHIO STATE UNIVERSITY	8,546E	577E	192E	448E	3,819E	944E	2,564E
TOTAL, 1ST 20 INSTS.	448,848	36,733	18,225	26,239	136,609	50,308	180,734
21 UNIVERSITY OF ROCHESTER	7,918	0	330	0	778	5,476	1,334
22 CARNEGIE-MELLON UNIV	7,873	0	338	605	2,083	1,647	3,200
23 VA POLYTECH INST & ST U	7,753	740	316	568	826	2,500	2,803
24 UNIVERSITY OF NEW MEXICO	7,368I	0	23I	108I	292I	238I	6,707I
25 UNIV OF TEXAS AT AUSTIN	6,682	969	1,147	1,030	2,140	1,268	128
26 UNIVERSITY OF MINNESOTA	6,412	493	1,662	489	943	1,600	1,225
27 NORTHWESTERN UNIVERSITY	6,388	0	694	1,419	736	771	2,768
28 UNIVERSITY OF UTAH	5,873	0	277	477	1,016	373	3,730
29 UNIVERSITY OF FLORIDA	5,851	476	320	542	1,566	926	2,019
30 PRINCETON UNIVERSITY	5,784	3,461	664	1,007	619	0	33
TOTAL, 1ST 30 INSTS.	516,750	42,872	23,996	32,484	147,608	65,109	204,681
31 UNIVERSITY OF WASHINGTON	5,756	1,206	735	1,257	511	888	1,159
32 N C STATE UNIV AT RALEIGH	5,525	366	933	213	1,393	505	2,115
33 COLUMBIA UNIV MAIN DIV	5,482	0	515	630	1,082	296	2,959
34 UNIVERSITY OF DENVER	5,050I	0	649I	0	2,248I	1,525I	628I
35 WOODS HOLE OCNGRPHIC INST	5,048	361I	37?I	398I	1,318I	978I	1,600I
36 UNIVERSITY OF VIRGINIA	4,906	0	121	120	798	388	3,479
37 UNIV OF PENNSYLVANIA	4,883	0	665	116	917	426	2,759
38 UNIVERSITY OF NOTRE DAME	4,879	454E	1,413E	293E	1,226E	0	1,493E
39 COLORADO STATE UNIVERSITY	4,489	0	3	1,453	1,175	191	1,667
40 OKLAHOMA STATE UNIVERSITY	4,282I	244I	316I	489I	829I	618I	1,786I
TOTAL, 1ST 40 INSTS.	567,050	45,503	29,739	37,453	159,105	70,924	224,326
41 UNIV OF MD COLLEGE PARK	4,277	557	575	843	1,627	548	127E
42 GEORGE WASHINGTON UNIV	4,124	1,237	0	204	81	159	2,403
43 LEHIGH UNIVERSITY	3,932	0	41	533	179	830	2,349
44 BROWN UNIVERSITY	3,863	278I	301I	305I	1,008I	748I	1,223I
45 UNIVERSITY OF ARIZONA	3,812	0	197	235	960	0	2,420
46 UNIVERSITY OF CONNECTICUT	3,485	0	519	246	484	525	1,711
47 YALE UNIVERSITY	3,385	0	948	0	305	0	2,132
48 IOWA ST U OF SCI & TECH	3,288	335	278	367	166	850	1,292
49 N MEX INST MINING & TECH	3,002I	0	0	0	0	2,155I	847I
50 UNIVERSITY OF COLORADO	2,928	287	405	739	1,195	278	24
TOTAL, 1ST 50 INSTS.	603,146	48,197	33,003	40,925	165,110	77,057	238,854

SEE FOOTNOTES AT END OF TABLE.

TABLE B-43. — FEDERALLY FINANCED R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING		ENGINEERING FIELDS						
		TOTAL	AERO/ASTRO-NAUTICAL	CHEMICAL	CIVIL	ELEC-TRICAL	MECH-ANICAL	OTHER
51	SYRACUSE UNIVERSITY	2,812	0	737	147	858	95	975
52	POLYTECHNIC INST OF N Y	2,779E	0	146E	159E	1,553E	339E	582E
53	U TENNESSEE KNOXVILLE	2,696I	0	414I	410I	641I	200I	1,031I
54	UNIVERSITY OF OKLAHOMA	2,658	180	325	1,903	219	0	31
55	ARIZONA STATE UNIVERSITY	2,542	0	936	153	502	731	220
56	STEVENS INSTITUTE OF TECH	2,536	0	0	0	103	210	2,223
57	UNIVERSITY OF KENTUCKY	2,511	143I	186I	284I	486I	362I	1,048I
58	MISSISSIPPI STATE UNIV	2,500	218	60	31	352	114	1,725
59	DREXEL UNIVERSITY	2,494	0	0	509	304	972	709
60	UNIVERSITY OF PITTSBURGH	2,476	0	673	407	109	17	1,270
	TOTAL, 1ST 60 INSTS.	629,150	48,738	36,480	44,930	170,237	80,097	248,668
61	CLEMSON UNIVERSITY	2,439	0	26	517	631	203	1,062
62	UNIVERSITY OF CINCINNATI	2,372	474E	1,005E	90E	452E	181E	170E
63	UNIVERSITY OF IOWA	2,321E	132I	171I	262I	451I	335I	970I
64	MICHIGAN TECH UNIVERSITY	2,264	0	31	365	215	638	1,015
65	WASHINGTON UNIVERSITY	2,249	0	66	85	542	579	977
66	UNIV OF MISSOURI ROLLA	2,241	0	119	102	45	305	1,670
67	TEXAS TECH UNIVERSITY	2,207	127I	163I	251I	427I	318I	921I
68	UNIV OF RHODE ISLAND	2,184I	123I	160I	249I	423I	315I	914I
69	U OF HOUSTON UNIV PARK	2,135	0	451	325	390	494	475
70	OREGON STATE UNIVERSITY	2,094	0	137	695	351	648	303
	TOTAL, 1ST 70 INSTS.	651,656	49,994	38,809	47,831	174,164	84,113	257,145
71	UNIV OF CAL DAVIS 1/	2,078	0	184	522	199	750	423
72	COLORADO SCHOOL OF MINES	2,073	0	273	0	0	90	1,710
73	UNIVERSITY OF DELAWARE	2,051	0	892E	175E	699E	263E	22E
74	UNIV OF ILL CHICAGO 2/	1,935	0	186	769	614	121	245
75	UNIV OF MASS AT AMHERST	1,926	0	382	226	803	363	152
76	US NAVAL POSTGRAD SCHOOL	1,897	702	10	0	639	546	0
77	WASHINGTON STATE UNIV	1,884	0	1,059	227	113	253	232
78	UNIV OF CENTRAL FLORIDA	1,879	0	0	105	239	63	1,472
79	RUTGERS THE ST UNIV OF NJ	1,849	0	221	0	116	310	1,192
80	LOUISIANA STATE UNIV	1,813	0	319	283	86	485	640
	TOTAL, 1ST 80 INSTS.	671,041	50,296	42,345	50,138	177,672	87,357	263,233
81	SUNY AT STONY BROOK	1,797	0	0	0	205	585	1,007
82	MICHIGAN STATE UNIVERSITY	1,763	0	141	158	317	441	706
83	SUNY AT BUFFALO	1,700	0	429	157	589	278	247
84	ILLINOIS INST OF TECH	1,675	0	435	6	292	804	138
85	AUBURN UNIVERSITY	1,567	127	280	53	520	204	383
86	UNIVERSITY OF KANSAS	1,536I	87I	113I	176I	298I	222I	640I
87	NORTHEASTERN UNIVERSITY	1,508I	0	0	60I	1,299I	148I	1I
88	DARTMOUTH COLLEGE	1,476	105I	116I	117I	386I	285I	467I
89	UNIV ALABAMA HUNTSVILLE	1,458	0	156	49	530	507	216
90	CLARKSON COLLEGE OF TECH	1,427	0	723	376	168	160	0
	TOTAL, 1ST 90 INSTS.	686,948	50,615	44,738	51,290	182,276	90,991	267,038
91	UNIV OF CAL SANTA BARBARA 1/	1,412	0	601	0	490	321	0
92	RICE UNIVERSITY	1,385I	0	307I	51I	506I	235I	286I
93	SAN DIEGO STATE UNIV	1,382	65	10	237	854	216	0
94	UNIVERSITY OF N DAKOTA	1,313I	0	873I	426I	0	14I	0
95	US NAVAL ACADEMY	1,230	79	0	0	100	405	646
96	CUNY CITY COLLEGE	1,218	0	379	31	402	406	0
97	WEST VIRGINIA UNIVERSITY	1,180	0	0	0	0	0	1,180
98	UTAH STATE UNIVERSITY	1,177	0	0	417	278	4	478
99	WAYNE STATE UNIVERSITY	1,164	0	97	14	300	228	525
100	UNIV OF CAL IRVINE 1/	1,150	0	0	0	0	0	1,150
	TOTAL, 1ST 100 INSTS.	699,559	50,759	47,005	52,464	185,206	92,820	271,303
	TOTAL, ALL OTHER INSTS.	35,768	1,414	4,516	5,154	6,762	7,619	10,303

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-44. — R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL							
	1983	1982	1981	1980	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
TOTAL, ALL INSTITUTIONS	890,026	822,099	766,504	677,604	74,300	335,853	407,333	72,540
1 JOHNS HOPKINS UNIVERSITY	57,314E	53,912	49,580	48,210	197E	4,392E	36,665E	15,860E
2 MASS INST OF TECHNOLOGY	56,726	49,094	57,114	46,362	5,507	8,914	42,305	0
3 STANFORD UNIVERSITY	25,679	23,133	19,742	17,345	0	6,589	3,467	15,623
4 CORNELL UNIVERSITY	24,562E	23,823E	19,343	17,249	2,196E	5,717E	13,636E	3,013
5 UNIV OF TEXAS AT AUSTIN	23,961	21,507	18,516	18,932	6,712	5,938	11,311	0
6 UNIV OF CAL BERKELEY 1/	21,570	18,142	17,402	15,914	2,607	7,945	11,018	0
7 CALIFORNIA INST OF TECH	21,027	17,661	19,550	17,886	3,827	6,994	10,206	0
8 UNIVERSITY OF ARIZONA	20,212	18,332	16,150	15,505	5,744	1,906	9,064	3,498
9 UNIV OF MD COLLEGE PARK	19,519E	18,363	18,500	16,888	0	4,334	12,648	2,537
10 UNIVERSITY OF CHICAGO	19,334E	17,722E	16,162E	14,501E	490E	4,798E	12,585E	1,461E
TOTAL, 1ST 10 INSTS.	289,904	261,689	252,099	228,792	27,280	57,727	162,905	41,992
11 UNIV OF CAL SAN DIEGO 1/	17,399	17,835	20,295	20,114	8,911	3,910	4,578	0
12 HARVARD UNIVERSITY	16,430E	14,212E	14,658E	13,422E	941E	6,898E	7,297E	1,294E
13 UNIV OF WIS-MADISON	15,594	14,490	13,390	13,135	2,005	5,310	6,284	1,995
14 UNIV OF ILL URBANA	14,993	14,679	12,392	10,800	807	5,886	8,300	0
15 MICHIGAN STATE UNIVERSITY	13,573	12,489	11,005	3,913	137	2,714	2,307	8,415
16 INDIANA UNIVERSITY	12,706	11,891	9,209	8,567	159	5,551	6,996	0
17 UNIVERSITY OF COLORADO	11,935	13,345	13,203	12,874	5,621	3,302	3,012	0
18 UNIV OF CAL LOS ANGELES 1/	11,822	12,576	11,285	11,063	348	5,496	5,978	0
19 COLUMBIA UNIV MAIN DIV	11,561	11,636	9,108	10,404	564	4,281	1,843	4,873
20 UNIV OF PENNSYLVANIA	11,036	9,156	9,999	9,130	3	4,982	6,051	0
TOTAL, 1ST 20 INSTS.	426,953	393,998	376,603	342,214	46,776	106,057	215,551	58,569
21 UNIVERSITY OF MINNESOTA	10,666	9,090	8,168	6,554	690	4,999	4,977	0
22 PRINCETON UNIVERSITY	10,315	11,023	8,984	7,842	1,713	3,509	5,093	0
23 YALE UNIVERSITY	10,217	9,044	8,683	7,309	414	3,341	6,462	0
24 UNIVERSITY OF MICHIGAN	9,524	7,950	9,521	6,534	408	2,244	6,192	680
25 UNIV OF HAWAII-MANOA	9,432E	8,756	7,569	7,100	7,125E	759E	1,548E	0
26 UNIV OF MASS AT AMHERST	8,915	8,154	6,404	4,328	1,850	5,162	1,588	315
27 UNIV OF CAL SANTA BARBARA 1/	8,912	6,116	6,140	3,695	0	1,902	4,934	2,076
28 PURDUE UNIVERSITY	8,100	7,653	7,834	6,375	0	4,542	3,558	0
29 SUNY AT STONY BROOK	7,857	8,973	8,530	6,251	309	2,607	4,941	0
30 UNIVERSITY OF WASHINGTON	7,701	8,087	6,126	5,430	532	2,162	5,007	0
TOTAL, 1ST 30 INSTS.	518,592	478,844	454,562	403,632	59,817	137,284	259,851	61,640
31 UNIVERSITY OF IOWA	7,629	8,301	7,208	7,650	582	1,806	5,241	0
32 UNIVERSITY OF ROCHESTER	7,602	8,223	7,367	6,343	0	3,167	4,435	0
33 UNIV OF CAL IRVINE 1/	7,227	7,309	6,969	4,908	0	1,777	5,268	182
34 UNIVERSITY OF PITTSBURGH	6,972	6,480	5,216	4,405	291E	3,267	2,752	662E
35 PENNSYLVANIA STATE UNIV	6,858	5,102	4,656	3,991	463	4,729	1,375	291
36 TEXAS A & M UNIVERSITY	6,071	6,385	5,066	5,427	0	4,963	1,108	0
37 UNIVERSITY OF OREGON MAIN	6,055	5,147	2,902	2,484	0	3,351	2,704	0
38 GEORGIA INSTITUTE OF TECH	6,050	5,678	5,856	5,678	0	3,401	2,649	0
39 UNIV OF CAL SANTA CRUZ 1/	5,865	4,794	4,072	3,386	3,826	895	1,135	9
40 OHIO STATE UNIVERSITY	5,842E	5,021	5,227	4,745	61E	3,616E	2,165E	0
TOTAL, 1ST 40 INSTS.	584,763	541,284	509,101	452,649	65,040	168,256	288,683	62,784
41 RUTGERS THE ST UNIV OF NJ	5,797	4,736	4,304	3,961	0	1,830	3,967	0
42 FLORIDA STATE UNIVERSITY	5,729	6,378	6,548	5,490	0	2,500	3,229	0
43 ARIZONA STATE UNIVERSITY	5,586	3,693	3,703	1,973	281	3,062	1,429	814
44 UNIVERSITY OF UTAH	5,476	4,923	4,428	3,858	0	3,638	1,838	0
45 UNIVERSITY OF FLORIDA	5,377	4,534	3,976	3,591E	1,726	2,347	59	1,245
46 UNIVERSITY OF NOTRE DAME	5,348	5,616	5,212	4,482	0	4,022	1,295	31
47 UNIVERSITY OF CONNECTICUT	5,334	4,098	3,298	2,765	0	2,720	2,614	0
48 NORTHWESTERN UNIVERSITY	5,333	4,460	4,318	3,630	0	3,413	1,920	0
49 UNIVERSITY OF OKLAHOMA	5,049	3,452	2,358	1,694	6	2,890	2,159	0
50 RICE UNIVERSITY	4,961I	4,700I	4,476I	3,829	2,068I	1,708I	1,185I	0
TOTAL, 1ST 50 INSTS.	638,753	587,874	551,722	487,922	69,115	196,386	308,378	64,874

SEE FOOTNOTES AT END OF TABLE.

TABLE B-44. — R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL							
	1983	1982	1981	1980	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
51 UNIV OF NEBRASKA-LINCOLN	4,789E	4,489	3,106	3,334	31E	3,431E	1,327E	0
52 LEHIGH UNIVERSITY	4,563	3,280	2,473	2,160	0	3,664	273	626
53 UNIV OF SOUTHERN CAL	4,471	3,368	3,362	3,373	33	3,404	1,034	0
54 UNIV OF ILL CHICAGO 2/	4,395	2,740	2,335	1,993	0	1,646	2,749	0
55 CARNEGIE-MELLON UNIV	4,215	4,090	4,035	3,871	0	1,869	2,346	0
56 LOUISIANA STATE UNIV	4,097	4,179	4,034	3,591	0	1,376	2,414	307
57 UNIVERSITY OF VIRGINIA	3,989	3,586	3,822	2,935	277	2,069	1,643	0
58 DUKE UNIVERSITY	3,826	3,214?	2,962	2,799	0	1,581	2,245	0
59 SYRACUSE UNIVERSITY	3,744	4,090	3,615	3,021	0	2,171	1,573	0
60 CASE WESTERN RESERVE UNIV	3,604	3,497	3,519	3,276	197	2,232	1,175	0
TOTAL, 1ST 60 INSTS.	680,446	624,402	585,005	517,275	69,653	219,829	325,157	65,807
61 N C STATE UNIV AT RALEIGH	3,537	1,753I	1,551	1,034	0	610	1,657	1,270
62 UNIV OF NEW HAMPSHIRE	3,533	3,251	2,203	2,158	0	284	3,249	0
63 UNIV OF SOUTH CAROLINA	3,509	3,168	1,236I	1,098E	0	2,721	788	0
64 BROWN UNIVERSITY	3,488	3,371	3,275	3,400	0	1,376	2,112	0
65 VA POLYTECH INST & ST U	3,436	2,986	2,777	2,604	0	2,090	1,346	0
66 WASHINGTON UNIVERSITY	3,303	2,715	2,370	2,359	0	1,228	2,075	0
67 UNIVERSITY OF DAYTON	3,291	4,026	4,672I	4,499	0	417	2,874	0
68 UNIVERSITY OF DENVER	3,284I	3,110	2,790I	2,381	0	1,349I	1,935I	0
69 RENSSELAER POLYTECH INST	3,265	3,488	2,941	2,367	0	2,640	625	0
70 U OF HOUSTON UNIV PARK	3,264	2,673	2,484	2,106	0	2,423	725	116
TOTAL, 1ST 70 INSTS.	714,356	654,943	611,304	541,301	69,653	234,967	342,543	67,193
71 UNIV OF CAL RIVERSIDE 1/	3,259	1,806	1,291	1,647	0	1,492	1,767	0
72 SUNY AT BUFFALO	3,253	2,742	2,598	1,986	0	2,589	620	44
73 WAYNE STATE UNIVERSITY	3,253	3,670	2,851	2,550	0	2,645	608	0
74 UNIV OF TEXAS AT DALLAS	3,164	2,974	3,013	3,651	0	203	2,961	0
75 COLORADO STATE UNIVERSITY	3,065	3,239	2,976	2,386	0	2,478	587	0
76 UNIV OF NC AT CHAPEL HILL	3,047	2,973	2,694	2,376	0	2,397	650	0
77 U TENNESSEE KNOXVILLE	2,992I	2,778	2,212I	1,639I	0	1,577I	1,415I	0
78 NEW YORK UNIVERSITY	2,978	3,158	2,803	2,601	0	971	2,007	0
79 UNIV OF CAL DAVIS 1/	2,935	2,759	2,394	2,573	0	1,755	1,180	0
80 CUNY CITY COLLEGE	2,883	2,593	2,320	1,702	0	728	2,155	0
TOTAL, 1ST 80 INSTS.	745,135	683,635	636,456	564,412	69,653	251,802	356,493	67,237
81 ROCKEFELLER UNIVERSITY	2,875	3,071	3,428	3,010	0	919	1,956	0
82 BOSTON COLLEGE	2,710	3,750	1,461	1,383	0	807	966	937
83 NORTHEASTERN UNIVERSITY	2,512I	2,375	2,146E	1,982I	0	1,019I	1,493I	0
84 HOWARD UNIVERSITY	2,461	1,136	1,523	1,537	0	2,336	125	0
85 IOWA ST U OF SCI & TECH	2,439	1,885	1,622	1,508	0	1,903	536	0
86 OREGON GRADUATE CENTER	2,341I	2,217I	2,059	1,732	0	929I	1,008I	404I
87 BRANDEIS UNIVERSITY	2,280	1,951	1,959	1,607	0	1,293	987	0
88 UNIVERSITY OF DELAWARE	2,236	1,643	1,927	1,622	0	1,895	341	0
89 BOSTON UNIVERSITY	2,190	1,896	1,795	1,580	358	863	969	0
90 UTAH STATE UNIVERSITY	2,172	971	678	569	0	619	1,553	0
TOTAL, 1ST 90 INSTS.	769,401	704,530	655,054	580,942	70,011	264,385	366,427	68,578
91 UNIV OF MISSOURI ROLLA	2,104	1,815	1,947	1,506	0	166	1,938	0
92 U TEXAS SYSTEM CANCER CTR	2,074	1,805	1,832	1,672	0	0	2,074	0
93 UNIVERSITY OF WYOMING	2,056	1,792	1,441	1,355	0	904	1,152	0
94 UNIVERSITY OF NEW MEXICO	2,011I	1,879	1,223	720	1,559I	452I	0	0
95 BRIGHAM YOUNG UNIVERSITY	1,980	1,529	1,037I	932E	102	1,850	0	28
96 UNIVERSITY OF LOWELL	1,973	945I	892	1,201	0	386	796	791
97 WESLEYAN UNIVERSITY	1,940I	1,940I	1,784I	760E	208I	1,525I	207I	0
98 UNIV OF ARK FAYETTEVILLE	1,907	2,776	2,442E	4,167E	0	1,316	591	0
99 UNIVERSITY OF GEORGIA	1,895	1,955	1,841	1,743	0	1,199	696	0
100 TENNESSEE STATE UNIV	1,829I	1,744I	1,602E	101I	59I	1,333I	350I	87I
TOTAL, 1ST 100 INSTS.	789,170	722,730	671,095	595,099	71,929	273,516	374,231	69,484
TOTAL, ALL OTHER INSTS.	100,856	99,369	95,409	82,505	2,361	62,337	33,102	3,056

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-45. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL							
	1983	1982	1981	1980	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
TOTAL, ALL INSTITUTIONS	699,292	649,558	618,612	554,455	50,439	248,990	340,658	59,205
1 JOHNS HOPKINS UNIVERSITY	55,003E	51,669	48,960	47,465	156E	3,604E	35,387E	15,856E
2 MASS INST OF TECHNOLOGY	49,067	42,350	50,873	42,074	801	8,374	39,892	0
3 STANFORD UNIVERSITY	21,785	19,113	18,426	16,723	0	5,968	3,227	12,590
4 CORNELL UNIVERSITY	20,529	20,149	17,162	15,405	1,504	4,766	11,531	2,728
5 CALIFORNIA INST OF TECH	19,218	17,061	18,736	17,011	3,827	6,554	8,837	0
6 UNIV OF CAL BERKELEY 1/	18,662	16,254	15,556	14,627	1,784	7,467	9,411	0
7 UNIVERSITY OF CHICAGO	17,114	15,904	15,091	13,328	409	3,998	11,387	1,320
8 UNIV OF MD COLLEGE PARK	16,396	15,433	13,893	12,658	0	2,834	11,569	1,993
9 UNIV OF CAL SAN DIEGO 1/	15,817	16,640	19,266	19,473	8,052	3,490	4,275	0
10 UNIV OF TEXAS AT AUSTIN	13,830	12,818	11,679	13,118	2,785	3,527	7,518	0
TOTAL, 1ST 10 INSTS.	247,421	227,391	229,848	211,882	19,318	50,582	143,034	34,487
11 HARVARD UNIVERSITY	12,443	10,763	11,101	10,160	713	5,224	5,526	980
12 UNIVERSITY OF ARIZONA	12,420	11,420	10,533	10,111	3,037	1,557	5,574	2,252
13 UNIV OF ILL URBANA	12,274	11,359	9,839	8,877	577	4,668	7,029	0
14 UNIV OF WIS-MADISON	11,692	11,271	10,715	10,128	1,585	3,693	5,010	1,404
15 COLUMBIA UNIV MAIN DIV	11,409	11,118	8,632	9,882	533	4,279	1,725	4,872
16 UNIV OF CAL LOS ANGELES 1/	11,304	12,200	10,934	10,883	337	5,047	5,920	0
17 INDIANA UNIVERSITY	10,757	9,548	8,148	7,591	128	4,642	5,987	0
18 MICHIGAN STATE UNIVERSITY	10,748	9,546	8,073	2,849	204	1,995	1,785	6,864
19 UNIVERSITY OF COLORADO	10,482	11,796	11,046	10,742	5,222	2,695	2,565	0
20 YALE UNIVERSITY	9,753	8,667	8,254E	6,927	384	3,008	6,361	0
TOTAL, 1ST 20 INSTS.	340,703	325,039	327,123	300,032	31,938	87,390	190,516	50,859
21 UNIV OF PENNSYLVANIA	9,162	8,078	9,333	8,108	3	4,037	5,122	0
22 PRINCETON UNIVERSITY	8,656	9,476	7,793	6,803	1,381	2,642	4,633	0
23 UNIVERSITY OF MINNESOTA	8,565	7,003	6,645	5,337	584	3,726	4,255	0
24 UNIVERSITY OF MICHIGAN	8,366	6,648	8,217	5,832	350	1,853	5,612	551
25 UNIV OF CAL SANTA BARBARA 1/	7,809	5,639	5,727	3,339	0	1,723	4,091	1,995
26 UNIV OF HAWAII-MANOA	7,587E	6,881	4,696	5,655	5,333E	750E	1,504E	0
27 PURDUE UNIVERSITY	7,355	7,039	6,800	5,817	0	3,966	3,389	0
28 UNIV OF CAL IRVINE 1/	7,055	7,036	6,793	4,796	0	1,725	5,193	137
29 UNIVERSITY OF WASHINGTON	7,045	6,777	5,981	5,161	440	1,771	4,834	0
30 UNIVERSITY OF ROCHESTER	7,003	7,511	6,366	5,258	0	2,800	4,203	0
TOTAL, 1ST 30 INSTS.	439,306	407,127	395,474	356,138	40,029	112,383	233,352	53,542
31 UNIVERSITY OF IOWA	6,617	6,576	5,829	6,192	539	1,230	4,848	0
32 UNIVERSITY OF PITTSBURGH	6,295	5,713	4,557	3,949	291	2,833	2,553	618
33 PENNSYLVANIA STATE UNIV	6,004	4,525	3,702	3,217	440	4,236	1,272	56
34 UNIV OF MASS AT AMHERST	5,620	5,410	4,317	3,442	1,200	3,336	1,084	0
35 SUNY AT STONY BROOK	5,453	6,129	5,957	4,737	215	1,809	3,429	0
36 UNIVERSITY OF NOTRE DAME	5,104	5,394	4,971	4,286	0	3,867	1,207	30
37 NORTHWESTERN UNIVERSITY	4,781	4,009	4,[illegible]	3,363	0	3,012	1,769	0
38 UNIVERSITY OF OREGON MAIN	4,716	4,136	2,[illegible]	2,215	0	2,686	2,030	0
39 OHIO STATE UNIVERSITY	4,681E	4,229	4,[illegible]01	3,826	54E	2,786E	1,841E	0
40 UNIVERSITY OF UTAH	4,314	4,174	3,979	3,363	0	3,085	1,229	0
TOTAL, 1ST 40 INSTS.	492,891	457,422	439,534	394,728	42,768	141,263	254,614	54,246
41 RUTGERS THE ST UNIV OF NJ	4,286	3,641	3,401	3,025	0	1,740	2,546	0
42 TEXAS A & M UNIVERSITY	4,196	4,492	3,645	3,956	0	3,327	869	0
43 RICE UNIVERSITY	3,906I	3,716I	3,539I	3,040	1,693I	1,081I	1,132I	0
44 CARNEGIE-MELLON UNIV	3,837	3,590	3,592	3,291	0	1,497	2,340	0
45 GEORGIA INSTITUTE OF TECH	3,614	3,072	3,248	3,290	0	2,032	1,582	0
46 UNIVERSITY OF VIRGINIA	3,473	3,247	3,549	2,691	272	1,663	1,538	0
47 DUKE UNIVERSITY	3,448	3,092I	2,710	2,523	0	1,372	2,076	0
48 ARIZONA STATE UNIVERSITY	3,430	2,892	3,478	1,836	32	2,124	990	284
49 UNIV OF ILL CHICAGO 2/	3,414	2,064	1,849	1,499	0	1,179	2,235	0
50 BROWN UNIVERSITY	3,287	3,053	2,995	3,000	0	1,282	2,005	0
TOTAL, 1ST 50 INSTS.	529,782	490,281	471,540	422,879	44,765	158,560	271,927	54,530

SEE FOOTNOTES AT END OF TABLE.

TABLE B-45. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	PHYSICAL SCIENCES TOTAL							
	1983	1982	1981	1980	ASTRONOMY	CHEMISTRY	PHYSICS	OTHER
51 UNIV OF NEW HAMPSHIRE	3,262	2,901	1,928	1,916	0	260	3,002	0
52 UNIVERSITY OF FLORIDA	3,173	2,607	1,815	1,987E	1,051	1,325	42	755
53 UNIV OF SOUTHERN CAL	3,143	2,333	2,289	2,676	9	2,456	678	0
54 UNIV OF NC AT CHAPEL HILL	3,006	2,944	2,569	2,339	0	2,381	625	0
55 UNIV OF CAL RIVERSIDE 1/	2,975	1,562	1,119	1,545	0	1,343	1,632	0
56 UNIVERSITY OF DAYTON	2,912	3,513	4,417I	4,176	0	369	2,543	0
57 FLORIDA STATE UNIVERSITY	2,864	3,008	3,125	2,486	0	1,115	1,749	0
58 UNIVERSITY OF CONNECTICUT	2,861	3,234	1,929	1,653	0	1,445	1,416	0
59 UNIV OF NEBRASKA-LINCOLN	2,807E	2,807	2,445	2,602	25E	1,995E	787E	0
60 WASHINGTON UNIVERSITY	2,802	2,304	2,004	1,974	0	1,963	1,736	0
TOTAL, 1ST 60 INSTS.	559,587	516,494	495,180	446,233	45,850	172,315	286,137	55,285
61 NEW YORK UNIVERSITY	2,787	2,927	2,638	2,360	0	869	1,918	0
62 CUNY CITY COLLEGE	2,771	2,491	2,186	1,604	0	692	2,079	0
63 CASE WESTERN RESERVE UNIV	2,754	2,689	2,952	2,821	193	1,443	1,118	0
64 UNIV OF CAL SANTA CRUZ 1/	2,746	1,991	1,588	1,747	1,043	661	1,037	5
65 UNIV OF SOUTH CAROLINA	2,699	2,247	954I	863E	0	2,221	478	0
66 UNIV OF CAL DAVIS 1/	2,685	2,402	2,040	2,198	0	1,550	1,135	0
67 BOSTON COLLEGE	2,675	3,701	1,284	1,210	0	785	953	937
68 N C STATE UNIV AT RALEIGH	2,674	1,215I	1,055	826	0	476	1,141	1,057
69 COLORADO STATE UNIVERSITY	2,507	2,826	2,568	2,074	0	2,055	452	0
70 UNIVERSITY OF DENVER	2,387I	2,271	2,330I	2,024	0	1,016I	1,371I	0
TOTAL, 1ST 70 INSTS.	586,272	541,254	514,775	463,960	47,086	184,083	297,819	57,284
71 VA POLYTECH INST & ST U	2,380	1,937	1,943	1,796	0	1,306	1,074	0
72 U TENNESSEE KNOXVILLE	2,347I	2,234	2,082I	1,521I	0	1,237I	1,110I	0
73 WAYNE STATE UNIVERSITY	2,273	2,329	2,061	1,904	0	1,813	460	0
74 SUNY AT BUFFALO	2,181	1,932	1,936	1,413	0	1,736	404	41
75 HOWARD UNIVERSITY	2,163	997	1,343	1,317	0	2,069	94	0
76 BRANDEIS UNIVERSITY	2,137	1,788	1,922	1,536	0	1,176	961	0
77 LOUISIANA STATE UNIV	2,029	1,968	2,075	1,736	0	600	1,429	0
78 UTAH STATE UNIVERSITY	2,022	851	514	425	0	520	1,502	0
79 BOSTON UNIVERSITY	2,011	1,699	1,638	1,417	358	746	907	0
80 UNIVERSITY OF OKLAHOMA	1,958	1,568	1,052	820	0	1,453	505	0
TOTAL, 1ST 80 INSTS.	607,773	558,557	531,341	477,845	47,444	196,739	306,265	57,325
81 UNIV OF TEXAS AT DALLAS	1,940	2,217	2,301	2,933	0	85	1,855	0
82 SYRACUSE UNIVERSITY	1,838	2,089	1,201	1,181	0	826	1,012	0
83 LEHIGH UNIVERSITY	1,779	1,455	1,484	1,084	0	1,498	93	188
84 U OF HOUSTON UNIV PARK	1,746	1,567	1,487	1,086	0	1,117	589	40
85 NORTHEASTERN UNIVERSITY	1,742I	1,658	1,450E	1,563I	0	861I	881I	0
86 UNIVERSITY OF DELAWARE	1,720	1,233	1,544	1,246	0	1,492	228	0
87 RENSSELAER POLYTECH INST	1,705	2,021	1,696E	1,480	0	1,379	326	0
88 SUNY AT ALBANY	1,621	1,507	1,836	1,638	0	762	859	0
89 ROCKEFELLER UNIVERSITY	1,589	1,431	1,497	1,212	0	584	1,005	0
90 WASHINGTON STATE UNIV	1,562	1,236	1,467	1,166	0	525	1,037	0
TOTAL, 1ST 90 INSTS.	625,015	574,971	547,304	492,434	47,444	205,868	314,150	57,553
91 UNIVERSITY OF NEW MEXICO	1,528I	1,455	782	641	1,122I	406I	0	0
92 CATHOLIC UNIV OF AMERICA	1,523	1,240	1,599	1,660	0	145	1,302	76
93 UNIVERSITY OF WYOMING	1,489	1,303	1,006	995	0	405	1,084	0
94 OREGON GRADUATE CENTER	1,428I	1,359I	1,300	1,010	0	616I	655I	157I
95 IOWA ST U OF SCI & TECH	1,340	1,045	896	725	0	1,013	327	0
96 POLYTECHNIC INST OF N Y	1,334E	1,029E	1,203E	658E	0	966E	339E	29E
97 OREGON STATE UNIVERSITY	1,317	1,206	1,181	984	0	992	325	0
98 COLLEGE OF WILLIAM & MARY	1,265I	839E	793	489I	0	327I	938I	0
99 UNIVERSITY OF KANSAS	1,248I	1,189I	1,700I	1,477I	0	1,035I	213I	0
100 DREXEL UNIVERSITY	1,219	1,236	1,496	1,350	0	586	633	0
TOTAL, 1ST 100 INSTS.	638,706	586,872	559,260	502,423	48,566	212,359	319,966	57,815
TOTAL, ALL OTHER INSTS.	60,586	62,686	59,353	52,032	1,873	36,631	20,692	1,390

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-46. — R&D EXPENDITURES IN CHEMISTRY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	335,853	310,668	285,520	244,454	248,990	231,489	216,630	189,287
1 MASS INST OF TECHNOLOGY	8,914	9,792	8,222	6,764	8,374	9,096	7,572	6,311
2 UNIV OF CAL BERKELEY 1/	7,945	6,283	6,553	6,022	7,467	5,691	6,008	5,601
3 CALIFORNIA INST OF TECH	6,994	6,136	6,901	6,328	6,554	5,809	6,196E	5,630
4 HARVARD UNIVERSITY	6,898E	5,512E	6,123E	4,797E	5,224	4,174	4,637	3,631
5 STANFORD UNIVERSITY	6,589	6,634	5,564	4,788	5,968	5,893	5,337	4,609
6 UNIV OF TEXAS AT AUSTIN	5,938	4,843	4,779	3,970	3,527	2,781	3,017	2,564
7 UNIV OF ILL URBANA	5,886	6,422	5,239	4,251	4,668	4,763	3,847	3,424
8 CORNELL UNIVERSITY	5,717E	6,239E	4,618	3,808	4,766	5,437	4,062	3,404
9 INDIANA UNIVERSITY	5,551	5,341	3,637	3,147	4,642	4,237	3,042	2,635
10 UNIV OF CAL LOS ANGELES 1/	5,496	5,187	4,420	4,159	5,047	4,978	4,127	4,017
TOTAL, 1ST 10 INSTS.	65,928	62,389	56,056	48,044	56,237	52,859	47,845	41,826
11 UNIV OF WIS-MADISON	5,310	4,567	4,122	2,976	3,693	3,404	3,134	2,944
12 UNIV OF MASS AT AMHERST	5,162	4,364	3,230	1,889	3,336	2,773	2,067	1,632
13 UNIVERSITY OF MINNESOTA	4,999	4,297	4,260	2,643	3,726	3,377	3,494	2,143
14 UNIV OF PENNSYLVANIA	4,982	3,068	3,386	3,688	4,037	2,745	3,073	3,143
15 TEXAS A & M UNIVERSITY	4,963	4,521	4,069	4,097	3,327	2,823	2,753	2,945
16 UNIVERSITY OF CHICAGO	4,798E	4,396E	4,139E	3,958E	3,998	3,716	3,719	3,558
17 PENNSYLVANIA STATE UNIV	4,729	3,564	3,413	2,973	4,236	3,222	2,773	2,527
18 JOHNS HOPKINS UNIVERSITY	4,592E	4,721	4,066	4,652	3,604E	3,800	3,881	4,444
19 PURDUE UNIVERSITY	4,542	4,459	4,600	3,596	3,966	3,946	3,715	3,151
20 UNIV OF MD COLLEGE PARK	4,334	4,009	3,109	2,766	2,834	3,063	2,418	2,292
TOTAL, 1ST 20 INSTS.	114,339	104,355	94,450	82,281	92,994	85,733	78,912	70,605
21 COLUMBIA UNIV MAIN DIV	4,281	4,700	3,564	4,437	4,279	4,365	3,471	4,054
22 UNIVERSITY OF NOTRE DAME	4,022	4,020	3,855	3,457	3,867	3,866	3,738	3,328
23 UNIV OF CAL SAN DIEGO 1/	3,910	3,894	4,430	4,425E	3,490	3,506	3,933	4,375E
24 LEHIGH UNIVERSITY	3,664	2,584	1,680	1,066	1,498	1,189	1,061	480
25 UNIVERSITY OF UTAH	3,638	3,364	3,076	2,811	3,085	2,858	2,720	2,373
26 OHIO STATE UNIVERSITY	3,616E	2,907	3,227	2,654	2,786E	2,355	2,679	2,144
27 PRINCETON UNIVERSITY	3,509	3,062	2,513	2,065	2,642	2,485	2,142	1,646
28 UNIV OF NEBRASKA-LINCOLN	3,431E	3,217	2,175	2,289	1,995E	1,995	1,757	1,909
29 NORTHWESTERN UNIVERSITY	3,413	3,026	2,995	2,367	3,012	2,711	2,813	2,221
30 UNIV OF SOUTHERN CAL	3,404	2,401	2,345	2,313	2,456	1,717	1,639	1,773
TOTAL, 1ST 30 INSTS.	151,227	137,530	124,310	110,165	122,104	112,780	104,867	94,908
31 GEORGIA INSTITUTE OF TECH	3,401	3,327	3,660	3,655	2,032	1,800	2,030	2,118
32 UNIVERSITY OF OREGON MAIN	3,351	2,971	1,389	1,119	2,686	2,530	1,235	1,035
33 YALE UNIVERSITY	3,341	2,875	2,781	2,023	3,008	2,599	2,609E	1,886
34 UNIVERSITY OF COLORADO	3,302	3,492	4,047	3,332	2,695	2,755	3,146	2,605
35 UNIVERSITY OF PITTSBURGH	3,267	2,714	2,039	1,641	2,833	2,188	1,581	1,366
36 UNIVERSITY OF ROCHESTER	3,167	3,123	2,966	2,089	2,800	2,774	2,553	1,667
37 ARIZONA STATE UNIVERSITY	3,062	2,323	2,153	1,449	2,124	1,996	1,958	1,365
38 UNIVERSITY OF OKLAHOMA	2,890	2,306	1,399	1,275	1,453	1,067	674	617
39 UNIV OF SOUTH CAROLINA	2,721	2,483	1,087I	970E	2,221	1,865	902I	816E
40 UNIVERSITY OF CONNECTICUT	2,720	2,049	1,748	1,300	1,445	1,113	1,022	773
TOTAL, 1ST 40 INSTS.	182,449	165,193	147,579	129,018	145,401	133,467	122,577	109,156
41 MICHIGAN STATE UNIVERSITY	2,714	2,493	2,178	1,638	1,995	1,832	1,541	1,157
42 WAYNE STATE UNIVERSITY	2,645	2,656	2,261	2,163	1,813	1,799	1,636	1,640
43 RENSSELAER POLYTECH INST	2,640	2,975	2,286	1,551	1,379	1,724	1,310E	962
44 SUNY AT STONY BROOK	2,607	2,783	2,691	1,966	1,809	1,901	2,080	1,632
45 SUNY AT BUFFALO	2,589	2,242	2,203	1,665	1,736	1,528	1,626	1,163
46 FLORIDA STATE UNIVERSITY	2,500	2,959	3,012	2,791	1,115	1,124	1,463	1,313
47 COLORADO STATE UNIVERSITY	2,478	2,479	2,385	1,973	2,055	2,230	2,079	1,717
48 U OF HOUSTON UNIV PARK	2,423	1,816	1,773	1,371	1,117	909	891	599
49 UNIV OF NC AT CHAPEL HILL	2,397	2,240	2,016	1,789	2,381	2,218	1,936	1,752
50 UNIVERSITY OF FLORIDA	2,347	2,248	2,302	2,283E	1,325	1,341	1,156	1,214E
TOTAL, 1ST 50 INSTS.	207,789	190,084	170,686	148,208	162,126	150,073	138,295	122,305

SEE FOOTNOTES AT END OF TABLE.

TABLE B-46. -- R&D EXPENDITURES IN CHEMISTRY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

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(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 HOWARD UNIVERSITY	2,336	982	1,466	1,267	2,069	867	1,248	1,101
52 UNIVERSITY OF MICHIGAN	2,244	2,064	2,016	2,064	1,853	1,547	1,591	1,775
53 CASE WESTERN RESERVE UNIV	2,232	2,185	2,149	1,938	1,443	1,487	1,732	1,617
54 SYRACUSE UNIVERSITY	2,171	2,868	2,259	764	826	1,278	551	396
55 UNIVERSITY OF WASHINGTON	2,162	2,276	1,500	1,326	1,771	1,775	1,404	1,117
56 VA POLYTECH INST & ST U	2,050	1,740	1,881	1,612	1,306	907	1,020	1,047
57 UNIVERSITY OF VIRGINIA	2,049	1,778	1,781	1,203	1,663	1,597	1,695	1,114
58 UNIVERSITY OF ARIZONA	1,906	1,587	1,598	1,380	1,557	1,228	1,084	953
59 IOWA ST U OF SCI & TECH	1,903	1,462	1,272	1,159	1,013	734	651	486
60 UNIV OF CAL SANTA BARBARA 1/	1,902	1,698	1,834	1,434	1,723	1,480	1,628	1,262
TOTAL, 1ST 60 INSTS.	228,804	208,724	188,972	162,375	177,350	162,973	150,859	123,173
61 UNIVERSITY OF DELAWARE	1,895	1,236	1,480	1,158	1,492	934	1,182	877
62 CARNEGIE-MELLON UNIV	1,869	1,941	2,225	2,075	1,497	1,465	1,76.	1,515
63 BRIGHAM YOUNG UNIVERSITY	1,850	1,378	931I	837E	1,025	810	67.I	569E
64 RUTGERS THE ST UNIV OF NJ	1,830	1,390	1,385	1,406	1,740	1,333	1,351	1,310
65 UNIVERSITY OF IOWA	1,826	1,331	1,822	1,488	1,230	1,195	923	807
66 UNIV OF CAL IRVINE 1/	1,777	1,661	1,915	1,398	1,725	1,593	1,821	1,344
67 UNIV OF CAL DAVIS 1/	1,745	1,537	1,244	1,290	1,550	1,415	1,140	1,230
68 RICE UNIVERSITY	1,708I	1,613I	1,536I	1,310	1,081I	1,028I	979I	841
69 UNIV OF ILL CHICAGO 2/	1,646	1,243	854	764	1,179	838	628	535
70 DUKE UNIVERSITY	1,581	1,107I	1,032	878	1,372	1,055I	924	701
TOTAL, 1ST 70 INSTS.	246,521	224,161	202,496	174,979	191,741	174,639	162,208	142,902
71 U TENNESSEE KNOXVILLE	1,577I	1,464	1,248I	929I	1,237I	1,177	1,151I	841I
72 HESLEYAN UNIVERSITY	1,525I	1,525I	1,395I	607E	858I	858I	821I	296E
73 UNIV OF CAL RIVERSIDE 1/	1,492	188	92	637	1,343	81	64	538
74 SUNY AT BINGHAMTON	1,402	767	680	643	933	537	522	457
75 OREGON STATE UNIVERSITY	1,398	1,225	1,220	1,068	992	902	910	759
76 CLARKSON COLLEGE OF TECH	1,398	1,[illegible]	1,135	1,157	843	706	778	719
77 LOUISIANA STATE UNIV	1,376	1,496	1,614	1,561	600	754	849	873
78 BROWN UNIVERSITY	1,376	1,165	1,208	1,200	1,282	1,037	1,063	900
79 UNIVERSITY OF DENVER	1,349I	1,278	1,180I	1,007	1,016I	966	985I	856
80 TENNESSEE STATE UNIV	1,333I	1,289I	1,171E	70I	812I	815I	740E	0
TOTAL, 1ST 80 INSTS.	260,747	235,577	213,439	183,858	201,157	182,472	170,091	149,191
81 UNIV OF ARK FAYETTEVILLE	1,316	1,639	1,741E	1,674E	840	1,115	417E	370
82 UNIVERSITY OF KANSAS	1,295I	1,217I	1,503I	1,329I	1,035I	986I	1,411I	1,226I
83 BRANDEIS UNIVERSITY	1,293	1,148	1,175	832	1,176	1,044	1,139	791
84 WASHINGTON UNIVERSITY	1,228	894	709	9 7	1,016	768	597	589
85 EMORY UNIVERSITY	1,207	858	861	7[illegible]	1,055	778	790	612
86 UNIVERSITY OF GEORGIA	1,199	1,25[illegible]	1,258	1,202	541	648	545	551
87 WRIGHT STATE UNIVERSITY	1,124	1,180	1,123	971	462	545E	589	694
88 OKLAHOMA STATE UNIVERSITY	1,088I	1,020I	813I	769I	594I	565I	395I	572I
89 NORTHEASTERN UNIVERSITY	1,019I	966	659E	607I	861I	819	419E	451I
90 SUNY COL OF ENV SCI & FOR	1,005I	943I	894	640	554I	528I	507	355
TOTAL, 1ST 90 INSTS.	272,521	246,699	224,175	193,544	209,341	190,268	176,900	155,402
91 NORTH TEXAS STATE UNIV	1,005	760	799	528E	459	307	366	46E
92 UNIVERSITY OF CINCINNATI	1,003	1,251	919	633	748	1,082	708	472
93 POLYTECHNIC INST OF N Y	979	853	1,002	769E	966E	655E	853E	515E
94 NEW YORK UNIVERSITY	971	1,134	1,064	943	869	1,002	936	843
95 UNIV OF MISSOURI COLUMBIA	966	370	340	354	427	212	284	279
96 ST JOHN'S UNIVERSITY (NY)	949E	843	765	755	25E	20	24	46
97 OREGON GRADUATE CENTER	929I	880I	821	734	616I	586I	561	428
98 ROCKEFELLER UNIVERSITY	919	1,227	1,460	1,170	584	606	684	485
99 UNIV OF WIS-MILWAUKEE	908	740	74[illegible]	672	487	392	414	461
100 UNIVERSITY OF WYOMING	904	507	496	207	405	469	277	188
TOTAL, 1ST 100 INSTS.	282,048	255,264	232,382	200,309	214,927	195,599	182,047	159,365
TOTAL, ALL OTHER INSTS.	53,805	55,404	53,138	44,145	34,063	35,890	34,583	29,922

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-47. — R&D EXPENDITURES IN PHYSICS AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	407,333	363,362	356,944	322,057	340,458	305,932	308,481	279,666
1 MASS INST OF TECHNOLOGY	42,305	34,160	44,113	36,635	39,892	32,664	42,658	35,540
2 JOHNS HOPKINS UNIVERSITY	36,665E	34,131	29,423	27,939	35,387E	33,852	29,015	27,402
3 CORNELL UNIVERSITY	13,636E	13,177E	10,967	10,298	11,531	11,348	9,986	9,326
4 UNIV OF MD COLLEGE PARK	12,648	11,901	12,096	10,329	11,569	10,347	9,697	8,221
5 UNIVERSITY OF CHICAGO	12,585E	11,533E	10,633E	9,400E	11,387	10,579	10,062	8,719
6 UNIV OF TEXAS AT AUSTIN	11,311	9,916	7,169	9,254	7,518	6,936	5,121	7,464
7 UNIV OF CAL BERKELEY 1/	11,018	2,176	2,695	2,832	9,411	2,093	2,597	2,732
8 CALIFORNIA INST OF TECH	10,206	8,039	10,283	9,385	8,837	7,884	10,174	9,211
9 UNIVERSITY OF ARIZONA	9,064	7,827	6,359	7,200	5,576	4,862	4,448	5,045
10 UNIV OF ILL URBANA	8,300	7,658	6,428	5,864	7,029	6,114	5,511	4,982
TOTAL, 1ST 10 INSTS.	167,738	140,518	140,326	123,134	148,135	125,678	129,169	118,642
11 HARVARD UNIVERSITY	7,297E	6,194E	5,996E	5,303E	5,526	4,691	4,541	4,014
12 INDIANA UNIVERSITY	6,996	6,395	5,441	5,312	5,987	5,176	4,998	4,870
13 YALE UNIVERSITY	6,462	5,722	5,620	4,831	6,361	5,654	5,401E	4,641
14 UNIV OF WIS-MADISON	6,284	6,643	6,067	6,090	5,010	5,517	6,911	4,985
15 UNIVERSITY OF MICHIGAN	6,192	5,441	6,895	3,976	5,612	4,721	6,068	3,599
16 UNIV OF PENNSYLVANIA	6,051	6,085	6,570	5,374	5,122	5,330	6,222	4,911
17 UNIV OF CAL LOS ANGELES 1/	5,978	6,738	6,393	6,316	5,920	6,685	6,354	6,291
18 UNIV OF CAL IRVINE 1/	5,268	5,591	5,010	3,387	5,193	5,441	4,969	3,380
19 UNIVERSITY OF IOWA	5,241	5,492	4,775	5,669	4,848	4,951	4,514	4,954
20 PRINCETON UNIVERSITY	5,093	5,634	4,345	4,200	4,633	5,115	3,927	3,803
TOTAL, 1ST 20 INSTS.	228,400	200,452	197,238	179,594	202,347	178,960	181,074	164,090
21 UNIVERSITY OF WASHINGTON	5,007	5,372	4,154	3,849	4,834	4,629	4,121	3,797
22 UNIVERSITY OF MINNESOTA	4,977	4,239	3,312	3,535	4,255	3,182	2,654	2,859
23 SUNY AT STONY BROOK	4,941	5,725	5,310	3,777	3,429	3,910	3,477	2,597
24 UNIV OF CAL SANTA BARBARA 1/	4,934	3,263	2,926	1,713	4,091	3,034	2,835	1,698
25 UNIV OF CAL SAN DIEGO 1/	4,578	3,332	3,001	3,017E	4,275	3,274	2,966	2,921E
26 UNIVERSITY OF ROCHESTER	4,435	5,100	4,401	4,254	4,203	4,737	3,813	3,591
27 RUTGERS THE ST UNIV OF NJ	3,967	3,346	2,919	2,555	2,546	2,308	2,050	1,715
28 PURDUE UNIVERSITY	3,558	3,194	3,234	2,779	3,389	3,093	3,085	2,666
29 STANFORD UNIVERSITY	3,467	3,541	14,173	12,557	3,227	3,173	13,289	12,118
30 UNIV OF NEW HAMPSHIRE	3,249	648	619	769	3,002	530	440	574
TOTAL, 1ST 30 INSTS.	271,713	238,211	241,362	218,399	239,598	210,830	219,804	198,722
31 FLORIDA STATE UNIVERSITY	3,229	3,419	3,536	2,699	1,749	1,884	1,662	1,173
32 UNIVERSITY OF COLORADO	3,012	3,586	2,876	3,848	2,565	3,147	2,027	3,200
33 UNIV OF TEXAS AT DALLAS	2,961	2,591	2,480	3,122	1,855	2,084	2,032	2,673
34 UNIVERSITY OF DAYTON	2,874	3,667E	4,611I	4,440	2,543	3,215	4,359I	4,121
35 UNIVERSITY OF PITTSBURGH	2,752	2,783	3,062	2,753	2,553	2,570	2,865	2,575
36 UNIV OF ILL CHICAGO 2/	2,749	1,495	1,481	1,229	2,295	1,236	1,221	964
37 UNIVERSITY OF OREGON MAIN	2,704	2,176	1,197	1,121	2,030	1,606	941	962
38 GEORGIA INSTITUTE OF TECH	2,649	2,351	2,196	2,023	1,582	1,272	1,218	1,172
39 UNIVERSITY OF CONNECTICUT	2,614	2,049	1,550	1,465	1,416	1,121	907	880
40 LOUISIANA STATE UNIV	2,414	2,346	2,197	1,777	1,429	1,208	1,220	860
TOTAL, 1ST 40 INSTS.	299,671	264,676	266,548	242,876	259,555	230,163	238,256	217,302
41 CARNEGIE-MELLON UNIV	2,346	2,149	1,830	1,796	2,340	2,125	1,824	1,776
42 MICHIGAN STATE UNIVERSITY	2,307	2,148	1,948	2,161	1,785	1,637	1,448	1,595
43 DUKE UNIVERSITY	2,245	2,107I	1,930	1,921	2,076	2,037I	1,786	1,822
44 OHIO STATE UNIVERSITY	2,165E	2,051	1,534	2,024	1,841E	1,817	1,558	1,660
45 UNIVERSITY OF OKLAHOMA	2,159	1,146	959	419	505	501	378	203
46 CUNY CITY COLLEGE	2,155	2,276	1,712	1,209	2,079	2,212	1,654	1,170
47 BROWN UNIVERSITY	2,112	2,206	2,067	1,700	2,005	2,016	1,932	1,600
48 WASHINGTON UNIVERSITY	2,075	1,821	1,661	1,402	1,736	1,536	1,407	1,385
49 U TEXAS SYSTEM CANCER CTR	2,074	1,805	1,832	1,672	1,110	999	1,079	953
50 NEW YORK UNIVERSITY	2,007	2,024	1,739	1,658	1,918	1,925	1,702	1,517
TOTAL, 1ST 50 INSTS.	321,316	284,409	284,160	258,838	276,950	246,968	253,024	230,983

SEE FOOTNOTES AT END OF TABLE.

TABLE B-47. -- R&D EXPENDITURES IN PHYSICS AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 ROCKEFELLER UNIVERSITY	1,926	1,844	1,968	1,840	1,005	835	813	727
52 UNIV OF MISSOURI ROLLA	1,938	1,642	1,678	1,198	1,004	839	879	506
53 UNIVERSITY OF DENVER	1,939I	1,832	1,610I	1,374	1,371I	1,305	1,345I	1,168
54 NORTHWESTERN UNIVERSITY	1,920	1,434	1,323	1,263	1,759	1,298	1,218	1,142
55 COLUMBIA UNIV BARN DIV	1,847	1,651	1,704	1,718	1,725	1,572	1,463	1,608
56 UNIVERSITY OF UTAH	1,838	1,559	1,352	1,047	1,229	1,316	1,259	990
57 UNIV OF CAL RIVERSIDE 1/	1,747	1,615	1,199	1,010	1,632	1,481	1,055	957
58 N C STATE UNIV AT RALEIGH	1,657	1,473I	1,303	818	1,141	1,020I	886	654
59 UNIVERSITY OF VIRGINIA	1,643	1,582	1,830	1,587	1,538	1,435	1,699	1,436
60 UNIV OF MASS AT AMHERST	1,581	1,942	1,505	1,066	1,084	1,394	1,125	905
TOTAL, 1ST 60 INSTS.	339,403	300,983	299,632	271,759	290,448	259,459	264,766	241,076
61 SYRACUSE UNIVERSITY	1,573	1,222	1,356	1,257	1,012	711	650	785
62 UTAH STATE UNIVERSITY	1,553	399	134	101	1,502	375	88	72
63 UNIV OF HAWAII-MANOA	1,548E	1,090	1,047	999	1,504E	1,077	1,045	999
64 NORTHEASTERN UNIVERSITY	1,493I	1,409	1,487E	1,375I	881I	839	1,031E	1,112I
65 ARIZONA STATE UNIVERSITY	1,429	820	1,250	390	990	800	1,220	359
66 U TENNESSEE KNOXVILLE	1,415I	1,314	964I	710I	1,110I	1,057	931I	680I
67 PENNSYLVANIA STATE UNIV	1,375	891	693	594	1,272	851	613	471
68 VA POLYTECH INST & ST U	1,346	1,246	1,196	992	1,074	1,030	923	749
69 UNIV OF NEBRASKA-LINCOLN	1,327E	1,244	902	1,045	787E	787	666	693
70 CATHOLIC UNIV OF AMERICA	1,302	1,021	1,434	1,316	1,302	841	1,149	1,089
TOTAL, 1ST 70 INSTS.	353,762	312,139	310,085	280,538	301,882	267,921	273,082	246,085
71 UNIVERSITY OF NOTRE DAME	1,295	1,350	1,357	1,025	1,207	1,282	1,233	958
72 COLLEGE OF WILLIAM & MARY	1,189I	863E	923	468I	938I	622E	599	443I
73 RICE UNIVERSITY	1,185I	1,126I	1,072I	920	1,132I	1,077I	1,025I	880
74 UNIV OF CAL DAVIS 1/	1,180	1,222	1,150	1,282	1,135	987	900	968
75 CASE WESTERN RESERVE UNIV	1,175	1,117	1,199	1,206	1,118	1,025	1,054	1,081
76 UNIVERSITY OF WYOMING	1,152	897	734	807	1,084	834	729	807
77 UNIV OF CAL SANTA CRUZ 1/	1,135	698	645	500	1,037	994	578	452
78 TEXAS A & M UNIVERSITY	1,108	1,864	997	1,330	869	1,669	852	1,011
79 WASHINGTON STATE UNIV	1,052	691	566	442E	1,037	682	521	357
80 UNIV OF SOUTHERN CAL	1,034	904	953	1,024	678	595	622	894
TOTAL, 1ST 80 INSTS.	365,267	322,871	319,681	289,543	312,117	277,288	281,195	255,936
81 OREGON GRADUATE CENTER	1,008I	936I	890	998	645I	624I	596	582
82 BRANDEIS UNIVERSITY	987	803	784	775	961	744	783	745
83 BOSTON UNIVERSITY	969	776	672	512	907	737	666	512
84 BOSTON COLLEGE	966	948	678	759	953	922	599	677
85 SUNY AT ALBANY	899	762	703	580I	859	689	607	531
86 MICHIGAN TECH UNIVERSITY	865	789	458	425	636	563	311	293
87 OHIO UNIVERSITY	858	721	655	485	433	426	412	293
88 MONTANA STATE UNIVERSITY	855	1,100	1,166	718	452	675	1,062	668
89 UNIVERSITY OF LOWELL	796	196I	188	139	193	193I	185	138
90 DREXEL UNIVERSITY	790	735	1,076	1,178	633	608	897	984
TOTAL, 1ST 90 INSTS.	374,260	330,697	326,954	296,112	318,799	283,469	287,374	261,365
91 UNIV OF SOUTH CAROLINA	788	559	149I	128E	478	382	521	47E
92 NORTH TEXAS STATE UNIV	771	753	524	399E	492	394	260	120
93 U OF HOUSTON UNIV PARK	725	847	711	735	589	648	596	487
94 OKLAHOMA STATE UNIVERSITY	712I	666I	539I	474I	339I	323I	225I	326I
95 UNIVERSITY OF GEORGIA	696	698	583	541	286	256	261	199
96 TUFTS UNIVERSITY	689I	655I	625I	601	688I	654I	624I	600
97 EMMANUEL COLLEGE	687I	696I	696I	696E	687I	693I	693I	693
98 UNIV ALABAMA HUNTSVILLE	670	680	622	579	598	680	595	579
99 UNIV OF NC AT CHAPEL HILL	650	733	678	587	625	726	633	587
100 RENSSELAER POLYTECH INST	625	513	655	357	326	297	386	345
TOTAL, 1ST 100 INSTS.	381,273	337,457	332,733	301,409	323,907	288,522	291,638	265,348
TOTAL, ALL OTHER INSTS.	26,060	25,845	24,211	20,648	16,751	17,410	16,843	14,318

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-48. — R&D EXPENDITURES IN THE ENVIRONMENTAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980–83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	ENVIRONMENTAL SCIENCES TOTAL				ATMOS-PHERIC	EARTH SCIENCES	OCEANOGRAPHY	OTHER
	1983	1982	1981	1980				
TOTAL, ALL INSTITUTIONS	618,126	558,819	550,355	509,166	97,743	212,599	224,749	82,633
1 UNIV OF CAL SAN DIEGO 1/	78,831	61,289	59,094	59,965	0	8,261	70,570	0
2 WOODS HOLE OCNGRPHIC INST	36,625	28,947	29,080	25,683	2,662I	12,116I	9,531I	12,326I
3 JOHNS HOPKINS UNIVERSITY	31,051E	29,299	28,756	28,447	9,108E	4,207E	12,840E	4,896E
4 COLUMBIA UNIV MAIN DIV	21,114	22,318	17,119	17,886	0	172	20,942	0
5 UNIV OF ALASKA FAIRBANKS	20,594	21,623	20,457	28,622	6,818	2,410	8,095	3,211
6 OREGON STATE UNIVERSITY	16,842	13,899	12,650	10,176	2,026	1,543	13,273	0
7 UNIV OF TEXAS AT AUSTIN	16,817	13,525	12,220	13,452	0	8,757	8,060	0
8 UNIVERSITY OF WASHINGTON	16,697	15,255	16,757	16,413	2,435	3,243	10,231	788
9 UNIV OF RHODE ISLAND	16,257I	15,290I	15,390I	11,385I	3,756I	6,283I	4,790I	1,428I
10 UTAH STATE UNIVERSITY	15,544	3,777	6,018	4,886	11,532	4,012	0	0
TOTAL, 1ST 10 INSTS.	270,372	225,222	217,541	216,915	38,387	51,004	168,332	22,649
11 UNIVERSITY OF MIAMI	14,301	16,125	21,220	12,491	3,619	71	5,635	4,976
12 UNIV OF WIS-MADISON	13,261	12,168	12,359	13,130	7,156	2,146	2,379	1,580
13 UNIVERSITY OF ARIZONA	13,148	14,581	12,723	12,105	0	4,773	0	8,375
14 UNIV OF HAWAII-MANOA	12,861E	11,742	10,793	9,720	347	10,331E	651	1,532E
15 MASS INST OF TECHNOLOGY	11,269	11,971	9,633	8,912	68	9,880	1,321	0
16 UNIV OF ILL URBANA	9,556	8,991	8,640	7,405	673	7,571	0	1,312
17 UNIVERSITY OF COLORADO	8,664	7,051	6,815	5,641	4,090	2,927	186	1,461
18 PENNSYLVANIA STATE UNIV	7,667	8,152	7,981	7,181	1,356	6,010	0	301
19 CALIFORNIA INST OF TECH	7,339	7,234	7,934	7,266	517I	2,499I	1,886I	2,437I
20 UNIV OF CAL LOS ANGELES 1/	7,003	6,972	6,885	6,721	1,159	5,844	0	0
TOTAL, 1ST 20 INSTS.	375,441	330,209	322,524	307,487	57,372	103,056	170,390	44,623
21 DESERT RESEARCH INSTITUTE	6,945	5,514	5,755	4,855	4,151	2,303	0	491
22 UNIVERSITY OF MICHIGAN	6,404	5,970	12,227	12,147	4,096	1,532	15	759
23 UNIV OF SOUTHERN CAL	6,345	6,641	5,858	6,601	0	1,326	3,030	1,989
24 TEXAS A & M UNIVERSITY	6,322	6,895	8,586	5,567	416	1,007	4,909	0
25 HARVARD UNIVERSITY	6,177E	6,624E	5,646E	5,548E	0	6,177E	0	0
26 UNIVERSITY OF OKLAHOMA	5,735	2,494	3,489	7,462	2,333	3,462	0	0
27 LOUISIANA STATE UNIV	5,661	7,042	7,777	7,503	0	1,092	4,194	375
28 UNIV OF NEBRASKA-LINCOLN	5,351E	5,726	4,009	4,865	717E	4,634E	0	0
29 FLORIDA STATE UNIVERSITY	4,888	4,487	4,070	3,594	2,018	515	1,430	925
30 UNIV OF CAL SANTA BARBARA 1/	4,729	585	654	3,112	0	629	3,813	287
TOTAL, 1ST 30 INSTS.	434,008	382,187	380,595	368,741	71,105	133,673	187,781	49,449
31 SUNY AT STONY BROOK	4,652	4,892	4,811	3,900	0	1,064	3,449	139
32 CORNELL UNIVERSITY	4,631	4,082E	3,629	3,363	0	4,631E	0	0
33 PRINCETON UNIVERSITY	4,467	4,261	3,807	2,921	1,861	2,606	0	0
34 UNIV OF MAINE ORONO	4,341	3,369	3,129	2,826	115	1,061	1,842	1,323
35 GEORGIA INSTITUTE OF TECH	4,203	3,948	3,166	2,404	870	2,219	1,114	0
36 COLORADO STATE UNIVERSITY	4,066	3,683	3,053	2,749	4,065	1	0	0
37 UNIV OF SOUTH CAROLINA	3,746	2,996	1,885I	1,691E	0	2,220	1,526	0
38 RUTGERS THE ST UNIV OF NJ	3,630	2,994	2,928	2,859	315	145	0	3,170
39 UNIVERSITY OF DELAWARE	3,575	3,235	3,319	3,109	0	262	3,313	0
40 UNIV OF NC AT CHAPEL HILL	3,482	3,114	3,400	3,060	0	2,345	1,137	0
TOTAL, 1ST 40 INSTS.	474,801	418,761	413,722	397,123	78,331	142,227	200,162	54,081
41 UNIVERSITY OF MINNESOTA	3,334	2,602	2,494	2,190	0	3,334	0	0
42 N C STATE UNIV AT RALEIGH	3,294	3,845I	3,401	3,153	0	1,563	1,731	0
43 SUNY AT ALBANY	3,183	2,885	2,895	2,328E	2,941	242	0	0
44 UNIVERSITY OF KANSAS	3,128I	2,797I	1,441I	1,506I	352I	1,433I	759I	584I
45 STANFORD UNIVERSITY	3,080	3,237	2,482	2,313	0	2,371	709	0
46 U OF MD CENTER FOR EES	3,070	3,182	3,009	3,027	0	0	2,939	131
47 UNIVERSITY OF VIRGINIA	2,928	2,785	2,369	1,680	1,572	1	1,347	8
48 N MEX INST MINING & TECH	2,844I	2,646	2,677	1,994	1,530I	1,334I	0	0
49 UNIV OF MD COLLEGE PARK	2,812E	2,138	1,502	652	1,294	706	812	0
50 SAN JOSE STATE UNIVERSITY	2,733I	2,554I	1,094	828I	22I	1,423I	440I	848I
TOTAL, 1ST 50 INSTS.	505,227	447,482	437,086	416,794	86,042	154,634	206,899	55,652

SEE FOOTNOTES AT END OF TABLE.

TABLE B-48. — R&D EXPENDITURES IN THE ENVIRONMENTAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

= CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	ENVIRONMENTAL SCIENCES TOTAL				ATMOS-PHERIC	EARTH SCIENCES	OCEAN-OGRAPHY	OTHER
	1983	1982	1981	1980				
51 UNIV OF MASS AT AMHERST	2,678	2,870	2,944	2,524	0	1,999	153	561
52 BROWN UNIVERSITY	2,605	2,345	2,467	2,100	0	2,603	0	2
53 UNIVERSITY OF GEORGIA	2,604	2,614	2,791	2,149	0	2,604I	0	0
54 SUNY COL OF ENV SCI & FOR	2,551I	2,370I	2,231	1,962	0	0	0	2,551I
55 UNIV OF CAL BERKELEY 1/	2,509	3,590	3,392	2,512	0	2,322	0	187
56 SOUTHERN ILL U-CARBONDALE	2,502	2,611	2,175	1,121	21	2,245	49	147
57 UNIVERSITY OF CHICAGO	2,501E	2,289E	2,540E	2,159E	176E	847E	643E	835E
58 US NAVAL POSTGRAD SCHOOL	2,440	2,292	1,600	1,264	744	0	1,696	0
59 ARIZONA STATE UNIVERSITY	2,408	1,035	977	864	155	1,244	0	1,009
60 DUKE UNIVERSITY	2,395	1,431I	1,545	1,000	0	1,160	1,235	0
TOTAL, 1ST 60 INSTS.	530,420	470,899	459,648	433,849	87,158	169,618	212,700	60,944
61 UNIVERSITY OF FLORIDA	2,347	2,125	1,917	541E	0	505	314	1,528
62 U OF HOUSTON UNIV PARK	2,302	2,[illegible]	3,757	768	0	1,175	0E	1,127E
63 UNIV OF NEW HAMPSHIRE	2,299	1,[illegible]	2,386	1,929	0	569	221	1,509
64 NEW MEXICO STATE UNIV	2,215	3,234	3,537	1,[illegible]15	1,025	1,107	0	83
65 UNIVERSITY OF UTAH	2,161	1,773	1,528	2,059	0	2,161	0	0
66 UNIVERSITY OF WYOMING	2,134	2,873	3,488	3,170	830	1,235	0	69
67 UNIV OF WIS-MILWAUKEE	1,764	1,564	1,461	1,549	197	148	1,400	19
68 UNIV OF PENNSYLVANIA	1,718	675	864	665	0	452	0	1,266
69 UNIVERSITY OF N DAKOTA	1,679I	1,697	853I	756I	1,544I	114I	0	21[illegible]
70 VA POLYTECH INST & ST U	1,583	2,467	2,810	2,444	0	1,583	0	0
TOTAL, 1ST 70 INSTS.	550,622	492,014	482,249	449,745	90,754	178,667	214,635	66,566
71 UNIV OF CAL SANTA CRUZ 1/	1,580	567	567	1,007	0	1,007	0	573
72 TENNESSEE STATE UNIV	1,561I	1,520I	1,381E	671	151	730I	234I	582I
73 UNIV OF SOUTH FLORIDA	1,[illegible]54	1,143	1,333	531	0	47	1,507	0
74 OHIO STATE UNIVERSITY	1,[illegible]4E	2,11[illegible]	1,972	1,464	0	424E	0	1,122E
75 UNIVERSITY OF CONNECTICUT	1,51[illegible]	1,313	999	1,007	0	257	1,255	0
76 COLORADO SCHOOL OF MINES	1,[illegible]	852	1,089	1,252	0	1,470	0	11
77 CARNEGIE-MELLON UNIV	1,456	1,739	1,561	1,754	0	0	0	1,456
78 CLARK UNIVERSITY	1,456I	1,382	0	35	0	0	0	1,456I
79 UNIV OF MISSOURI COLUMBIA	1,358	1,021	852	643	1,167	191	0	0
80 WENTWORTH INST OF TECH	1,327	1,271	1,761	2,108	1,327	0	0	0
TOTAL, 1ST 80 INSTS.	565,453	504,933	493,764	459,613	93,263	182,793	217,631	71,766
81 UNIV OF NEVADA - RENO	1,281I	1,058E	921	444	0	1,281I	0	0
82 WASHINGTON UNIVERSITY	1,265	1,049	875	693	0	1,265	0	0
83 S DAK SCH MINES & TECH	1,220I	1,137I	1,073I	952I	222I	508I	337I	153I
84 SUNY COLLEGE BUFFALO	1,210I	1,209I	1,202I	1,085I	0	713I	149I	348I
85 UNIVERSITY OF NEW MEXICO	1,134I	1,063	866	886	0	1,134I	0	0
86 OCCIDENTAL COLLEGE	1,111	857	1,347	0	0	0	1,111	0
87 YALE UNIVERSITY	1,096	926	808	733	318	340	405	33
88 UNIV OF WIS-SUPERIOR	1,062	1,139	783	545	0	0	0	1,062
89 UNIV OF TEXAS AT DALLAS	1,050	1,262	789	711	0	1,050	0	0
90 MCNEESE STATE UNIVERSITY	1,021	12	0	0	1	975	0	45
TOTAL, 1ST 90 INSTS.	576,903	514,645	502,428	465,662	93,804	190,059	219,633	73,407
91 MICHIGAN STATE UNIVERSITY	1,014	940	2,383	2,542	0	1,014	0	0
92 U TENNESSEE KNOXVILLE	1,012I	940	932I	689I	0	304I	0	708I
93 NORTH TEXAS STATE UNIV	974	1,253	714	977E	0	23	0	951
94 UNIV OF MISSOURI SYS OFF	972	876	894	953	915	0	0	57
95 PURDUE UNIVERSITY	970	1,207	1,328	841	220I	370I	286I	88I
96 OLD DOMINION UNIVERSITY	948I	880I	828I	732I	92I	444I	223I	189I
97 UNIVERSITY OF OREGON MAIN	913	714	763	785	0	664	249	0
98 UNIV OF CAL RIVERSIDE 1/	904	916	899	652	0	904	0	0
99 UNIVERSITY OF GUAM	873	631	1,406	1,112	3	310	560	0
100 U OF CAL SYS WIDE PRGRMS 1/	863	183	207	0	0	102	0	761
TOTAL, 1ST 100 INSTS.	586,346	523,185	512,782	474,945	95,034	194,200	220,951	76,161
TOTAL, ALL OTHER INSTS.	31,780	35,634	37,573	34,221	2,711	18,799	3,798	6,472

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

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SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-49. — FEDERALLY FINANCED R&D EXPENDITURES IN THE ENVIRONMENTAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	ENVIRONMENTAL SCIENCES TOTAL				ATMOS-PHERIC	EARTH SCIENCES	OCEAN-OGRAPHY	OTHER
	1983	1982	1981	1980				
TOTAL, ALL INSTITUTIONS	426,761	391,403	391,929	371,862	76,108	134,332	171,456	44,865
1 UNIV OF CAL SAN DIEGO 1/	66,662	52,713	53,297	52,191	0	5,796	60,866	0
2 WOODS HOLE OCNGRPHIC INST	30,949	25,022	24,574	21,801	2,106I	10,838I	7,862I	10,143I
3 JOHNS HOPKINS UNIVERSITY	27,532E	26,262	27,539	26,856	8,674E	2,028E	12,757E	4,073E
4 COLUMBIA UNIV MAIN DIV	19,074	20,829	14,762	17,638	0	131	18,943	0
5 UNIVERSITY OF WASHINGTON	15,478	14,069	14,919	14,962	2,194	2,595	10,018	671
6 UNIV OF RHODE ISLAND	14,485I	13,791I	14,562I	10,379I	3,586I	5,451I	4,374I	1,074I
7 OREGON STATE UNIVERSITY	13,162	9,835	9,229	7,924	1,876	672	10,614	0
8 UNIVERSITY OF MIAMI	10,653	10,946	13,874	8,336	3,357	9	3,618	3,669
9 UTAH STATE UNIVERSITY	10,62[illegible]	2,851	5,355	4,245	9,652	981	0	0
10 MASS INST OF TECHNOLOGY	9,965	11,266	9,102	8,593	59	8,611	1,295	0
TOTAL, 1ST 10 INSTS.	226,553	187,584	187,213	172,925	31,504	37,112	130,347	19,630
11 UNIV OF ALASKA FAIRBANKS	9,[illegible]	12,689	12,550	20,997	3,329	1,019	3,705	1,219
12 UNIV OF HAWAII-MANOA	9,117E	8,559	7,930	7,320	344	7,627E	643	603E
13 UNIV OF WIS-MADISON	8,319	8,523	8,082	8,528	6,237	939	823	340
14 UNIVERSITY OF COLORADO	7,853	6,363	6,070	4,781	3,809	2,514	179	1,391
15 CALIFORNIA INST OF TECH	6,777	6,493	6,916	6,341	462I	2,373I	1,722I	2,220I
16 UNIV OF CAL LOS ANGELES 1/	5,315	5,299	5,316	5,312	1,114	4,201	0	0
17 TEXAS A & M UNIVERSITY	5,112	5,599	6,649	4,961	396	558	4,158	0
18 UNIVERSITY OF MICHIGAN	4,995	4,484	7,994	8,657	3,646	933	12	404
19 UNIV OF SOUTHERN CAL	4,7[illegible]	4,778	4,223	4,301	0	921	2,337	1,506
20 UNIV OF TEXAS AT AUSTIN	4,[illegible]8	4,342	4,966	5,627	0	4,154	604	0
TOTAL, 1ST 20 INSTS.	285,[illegible]35	254,713	257,909	249,750	50,841	62,351	144,530	27,313
21 HARVARD UNIVERSITY	4,678	5,017	4,276	4,199	[illegible]	4,678	0	0
22 PENNSYLVANIA STATE UNIV	4,338	5,100	5,099	4,515	1,123	2,937	0	278
23 CORNELL UNIVERSITY	4,331	3,641	3,499	3,268	0	4,331	0	0
24 UNIV OF ILL URBANA	4,130	4,211	4,698	3,927	551	3,094	0	485
25 UNIVERSITY OF ARIZONA	3,718	3,825	3,775	3,787	0	2,654	0	1,064
26 UNIV OF CAL SANTA BARBARA 1/	3,665	523	584	2,173	0	610	2,813	242
27 COLORADO STATE UNIVERSITY	3,278	3,188	2,905	2,071	3,278	0	0	0
28 SUNY AT STONY BROOK	3,231	3,[illegible]41	3,052	2,676	0	739	2,395	97
29 FLORIDA STATE UNIVERSITY	3,220	2,867	2,369	2,090	1,460	291	993	476
30 DESERT RESEARCH INSTITUTE	3,138	2,723	2,686	2,381	1,219	1,894	0	25
TOTAL, 1ST 30 INSTS.	322,742	289,149	290,852	280,837	58,472	83,579	150,731	29,980
31 UNIVERSITY OF VIRGINIA	2,745	2,486	2,000	1,[illegible]	1,396	0	1,347	2
32 N C STATE UNIV AT RALEIGH	2,726	2,664I	2,312	1,521	0	1,035	1,691	0
33 PRINCETON UNIVERSITY	2,693E	2,666	2,736	2,020	1,308E	1,385	0	0
34 GEORGIA INSTITUTE OF TECH	2,510	2,136	1,756	1,393	520	1,325	665	0
35 BROWN UNIVERSITY	2,477	2,213	2,225	1,900	0	2,477	0	0
36 US NAVAL POSTGRAD SCHOOL	2,440	2,224	1,584	1,196	744	0	1,696	0
37 LOUISIANA STATE UNIV	2,366	3,434	5,162	4,921	0	166	2,170	30
38 UNIV OF MD COLLEGE PARK	2,306	1,689	1,227	480	1,165	606	535	0
39 UNIV OF NC AT CHAPEL HILL	2,216	2,062	1,947	1,761	0	1,894	322	0
40 UNIVERSITY OF CHICAGO	2,213	2,055	2,299	1,969	150E	775E	562E	726E
TOTAL, 1ST 40 INSTS.	347,454	312,778	314,100	299,402	63,755	93,242	159,719	30,738
41 UNIVERSITY OF MINNESOTA	2,104	1,287	1,260	1,110	0	2,104	0	0
42 UNIV OF MAINE ORONO	2,069	1,576	1,445	1,473	95	835	1,031	108
43 SUNY AT ALBANY	2,048	2,044	1,964	1,472	1,873	175	0	0
44 STANFORD UNIVERSITY	1,925	2,011	1,718	1,435	0	1,269	656	0
45 UNIV OF SOUTH CAROLINA	1,924	1,766	1,680I	1,520E	0	930	994	0
46 N MEX INST MINING & TECH	1,851I	1,762	1,842	1,531	720I	1,131I	0	0
47 UNIVERSITY OF DELAWARE	1,687	1,714	1,948	1,789	0	226	1,461	0
48 UNIVERSITY OF OKLAHOMA	1,673	1,370	1,719	3,606	1,265	408	0	0
49 UNIV OF CAL BERKELEY 1/	1,627	2,446	2,350	1,916	0	1,627	0	0
50 UNIVERSITY OF FLORIDA	1,588	1,410	1,107	168E	0	158	212	1,218
TOTAL, 1ST 50 INSTS.	365,950	330,164	331,133	315,422	67,708	102,105	164,073	32,064

SEE FOOTNOTES AT END OF TABLE.

TABLE B-49. — FEDERALLY FINANCED R&D EXPENDITURES IN THE ENVIRONMENTAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83 - CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	ENVIRONMENTAL SCIENCES TOTAL				ATMOS-PHERIC	EARTH SCIENCES	OCEAN-OGRAPHY	OTHER
	1983	1982	1981	1980				
51 ARIZONA STATE UNIVERSITY	1,551	890	872	751	10	1,053	0	488
52 UNIV OF NEW HAMPSHIRE	1,540	1,331	1,783	1,415	0	523	0	1,017
53 UNIV OF NEBRASKA-LINCOLN	1,522E	2,122	1,475	1,716	235E	1,287E	0	0
54 UNIVERSITY OF N DAKOTA	1,503I	1,496	685I	619I	1,413I	85I	0	5I
55 UNIVERSITY OF UTAH	1,494	1,064	1,024	2,395	0	1,494	0	0
56 SOUTHERN ILL U-CARBONDALE	1,464	1,297	1,412	644	3	1,376	68	17
57 UNIVERSITY OF WYOMING	1,381	2,404	2,647	2,436	736	598	0	47
58 UNIV OF PENNSYLVANIA	1,363	372	614	417	0	319	0	1,044
59 UNIVERSITY OF GEORGIA	1,345	1,334	1,389	1,202	0	1,345I	0	0
60 WENTWORTH INST OF TECH	1,327	1,268	1,728	2,088	1,327	0	0	0
TOTAL, 1ST 60 INSTS.	380,440	343,742	344,762	329,105	71,432	110,185	164,141	34,682
61 CLARK UNIVERSITY	1,250I	1,190	0	24	0	0	0	1,250I
62 SAN JOSE STATE UNIVERSITY	1,212I	1,216I	515	396I	0I	719I	144I	349I
63 SUNY COLLEGE BUFFALO	1,186I	1,191I	1,196I	1,082I	0	705I	141I	340I
64 WASHINGTON UNIVERSITY	1,134	974	839	666	0	1,134	0	0
65 UNIV OF CAL SANTA CRUZ 1/	1,095	457	504	920	0	893	0	202
66 NEW MEXICO STATE UNIV	1,093	1,170	843	633	764	246	0	83
67 DUKE UNIVERSITY	1,082	1,186I	1,039	938	0	41	1,041	0
68 TENNESSEE STATE UNIV	1,060I	1,064I	966E	0	9I	499I	135I	417I
69 UNIV OF MASS AT AMHERST	1,033	1,058	1,250	815	0	986	17	30
70 OHIO STATE UNIVERSITY	1,006E	1,384	1,189	943	0	388E	0	618E
TOTAL, 1ST 70 INSTS.	391,591	354,632	353,103	335,522	72,205	115,796	165,619	37,971
71 YALE UNIVERSITY	965	852	746	718	280	299	357	29
72 UNIV OF WIS-SUPERIOR	951	1,056	676	419	0	0	0	951
73 MCNEESE STATE UNIVERSITY	930	5	0	0	0	885	0	45
74 UNIVERSITY OF NEW MEXICO	929I	884	350	546	0	929I	0	0
75 UNIV OF MISSOURI COLUMBIA	907	355	521	413	832	75	0	0
76 U OF MD CENTER FOR EES	850	1,003	860	472	0	0	754	96
77 PURDUE UNIVERSITY	835	1,086	1,194	764	207I	314I	252I	62I
78 COLORADO SCHOOL OF MINES	832	709	536	1,048	0	821	0	11
79 UNIVERSITY OF CONNECTICUT	811	716	585	602	0	136	675	0
80 U TENNESSEE KNOXVILLE	794I	756	883I	645I	0	239I	0	555I
TOTAL, 1ST 80 INSTS.	400,395	362,054	359,454	341,149	73,524	119,194	167,657	39,720
81 UNIV OF WIS-MILWAUKEE	748	639	590	772	176	47	525	0
82 SUNY COL OF ENV SCI & FOR	728I	693I	666	459	0	0	0	728I
83 VA POLYTECH INST & ST U	715	1,000	1,909	1,959	0	715	0	0
84 S DAK SCH MINES & TECH	701I	667I	641I	580I	172I	265I	213I	51I
85 NORTH TEXAS STATE UNIV	675	954	418	774E	0	16	0	659
86 ST LOUIS UNIVERSITY	658I	569I	544I	604	45I	230I	169I	214I
87 UNIV OF NEVADA - RENO	657I	568	728	373	0	657I	0	0
88 MONT COL MINRL SCI & TECH	625	932	1,738	1,275	0	625	0	0
89 UNIVERSITY OF OREGON MAIN	624	545	563	565	0	548	76	0
90 UNIV OF TEXAS AT DALLAS	618	711	337	285	0	618	0	0
TOTAL, 1ST 90 INSTS.	407,144	369,332	367,588	348,796	73,917	123,215	168,640	41,372
91 SUNY AT BUFFALO	599	577	665	595	0	599	0	0
92 OREGON GRADUATE CENTER	586I	557I	533	531	531I	55I	0	0
93 NOVA UNIVERSITY	542	480	499E	545I	48	107	314	73
94 UNIV OF SOUTH FLORIDA	529	559	603	329	0	5	524	0
95 RUTGERS THE ST UNIV OF NJ	525	547	614	545	147	110	0	268
96 U OF HOUSTON UNIV PARK	513	747	524	370	0	99	0E	414E
97 FAIRLEIGH DICKINSON UNIV	509	461	507	563	3	2	499	5
98 MICHIGAN STATE UNIVERSITY	506	674	1,185	1,157	0	506	0	0
99 NORTHWESTERN UNIVERSITY	501	336	204	291	0	501	0	0
100 TRINITY UNIVERSITY	469I	377	494	0	469I	0	0	0
TOTAL, 1ST 100 INSTS.	412,423	374,747	373,416	353,722	75,115	125,199	169,977	42,132
TOTAL, ALL OTHER INSTS.	14,338	16,656	18,513	18,140	993	9,133	1,479	2,733

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-50. — R&D EXPENDITURES IN MATHEMATICAL AND COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	278,238	244,725	222,028	192,736	204,092	178,927	161,282	137,945
1 JOHNS HOPKINS UNIVERSITY	49,339E	46,253	45,033	42,018	49,117E	45,987	44,778	41,788
2 CARNEGIE-MELLON UNIV	15,745	11,434	10,472	5,923	11,475	9,222	7,657	4,906
3 STANFORD UNIVERSITY	10,639	10,213	7,946	7,113	8,831	8,232	7,089	6,406
4 MASS INST OF TECHNOLOGY	10,268	8,765	10,622	9,007	9,003	7,546	8,031	7,200
5 NEW MEXICO STATE UNIV	10,270	7,785	304	211	8,524	6,700	214	152
6 UNIV OF WIS-MADISON	6,999	5,884	4,783	4,610	5,333	4,827	3,609	3,248
7 GEORGIA INSTITUTE OF TECH	6,980	5,451	4,915	4,288	4,169	2,949	2,726	2,485
8 NEW YORK UNIVERSITY	6,853	6,473	4,948	5,004	6,519	6,399	4,887	4,778
9 UNIV OF ILL URBANA	6,731	6,853	5,517	5,384	3,501	3,574	2,867	2,419
10 PENNSYLVANIA STATE UNIV	6,136	5,118	4,797	4,475	788	640	593	444
TOTAL, 1ST 10 INSTS.	130,060	114,229	99,337	88,033	107,260	96,076	82,451	73,826
11 IOWA ST U OF SCI & TECH	5,100	3,976	2,929	2,175	1,804	1,301	515	532
12 UNIV OF TEXAS AT AUSTIN	4,699	3,609	3,222	2,996	2,731	1,686	1,456	1,424
13 WASHINGTON UNIVERSITY	3,908	3,825	4,352	4,050	3,603	3,776	4,066	3,813
14 YALE UNIVERSITY	3,864	2,718	1,869	2,016	3,341	2,306	1,746	1,867
15 UNIVERSITY OF OKLAHOMA	3,812	3,861	4,276	833	2,166	2,019	3,142	33
16 UNIV OF SOUTHERN CAL	3,615	2,271	944	245	2,324	1,102	390	204
17 RUTGERS THE ST UNIV OF N	3,322	2,571	2,584	3,014	2,307	1,828	2,017	1,525
18 UNIV OF MD COLLEGE PARK	3,233E	2,024	5,775	5,116	2,535	1,588	2,048	1,805
19 UNIVERSITY OF MICHIGAN	3,047	2,436	2,364	1,672	1,133	921	963	773
20 UNIV OF CAL BERKELEY 1/	3,000	2,674	1,995	1,712	2,637	2,406	1,765	1,582
TOTAL, 1ST 20 INSTS.	167,660	144,194	129,607	111,862	131,841	115,009	100,799	87,384
21 FLORIDA STATE UNIVERSITY	2,950	3,195	3,034	3,247	594	742	488	420
22 UNIVERSITY OF GEORGIA	2,787	1,926	1,640	1,347	1,169	1,051	907	722
23 PRINCETON UNIVERSITY	2,763	2,179	1,688	1,902	1,971	1,547	1,232	1,375
24 UNIV OF PENNSYLVANIA	2,758	3,162	4,697	3,465	2,071	2,085	3,235	2,389
25 BROWN UNIVERSITY	2,736	2,399	1,995	1,900	2,394	2,199	1,984	1,870
26 CORNELL UNIVERSITY	2,702	2,643E	2,035	1,543	2,341	2,221	1,817	1,351
27 COLUMBIA UNIV MAIN DIV	2,542	841	649	598	2,542	839	644	573
28 UNIVERSITY OF UTAH	2,516	1,656	1,458	1,313	1,929	1,104	828	964
29 ST JOHN'S UNIVERSITY (NY)	2,483E	2,383	2,364	2,003	0	0	0	0
30 GEORGE WASHINGTON UNIV	2,447	2,708	2,739	1,554	2,295	2,040	2,168	1,181
TOTAL, 1ST 30 INSTS.	194,344	167,286	151,906	130,734	149,147	128,837	114,062	98,229
31 UNIVERSITY OF WASHINGTON	2,383	1,988	2,280	900	2,068	1,736	1,568	869
32 HARVARD UNIVERSITY	2,341E	1,545E	1,689E	1,820E	1,773	1,170	1,279	1,378
33 UNIVERSITY OF MINNESOTA	2,338	1,767	1,364	1,398	1,892	1,381	1,080	902
34 UNIV OF MASS AT AMHERST	2,323	1,539	1,145	660	1,863	1,293	1,103	504
35 UNIV OF CAL SAN DIEGO 1/	2,259	1,907	1,473	705	1,737	1,637	1,379	430
36 U TEXAS SYSTEM CANCER CTR	2,203	2,191	2,328	3,046	1,459	1,536	1,708	1,667
37 PURDUE UNIVERSITY	2,143	1,725	1,507	1,476	1,950	1,625	1,307	1,322
38 CALIFORNIA INST OF TECH	2,116	2,142	2,339	2,142	1,260	1,442	1,636	1,524
39 LOUISIANA STATE UNIV	2,029	1,952	1,229	1,029	251	184	123	99
40 BOSTON COLLEGE	1,768	0	2,137	1,863	1,756	0	2,027	1,743
TOTAL, 1ST 40 INSTS.	216,247	184,042	169,397	145,773	165,156	140,841	127,271	108,667
41 OHIO STATE UNIVERSITY	1,647E	1,219	1,294	1,250	870E	997	978	820
42 N C STATE UNIV AT RALEIGH	1,579	1,235I	1,114	1,037	555	454I	394	415
43 UNIV OF WEST FLORIDA	1,501	1,455	469	333	1,17[illegible]	808	245	84
44 NEW YORK INST TECHNOLOGY	1,467	1,361I	1,264I	1,264	0	0I	0I	0
45 UNIVERSITY OF PITTSBURGH	1,426	1,325	1,758	1,789	854	845	812	711
46 UNIV OF NC AT CHAPEL HILL	1,388	1,302	1,371	744	1,322	1,229	1,167	711
47 UNIVERSITY OF ROCHESTER	1,326	1,236	882	875	1,261	1,115	732	722
48 UNIV OF CAL SANTA BARBARA 1/	1,274	1,041	752	660	611	596	606	481
49 US NAVAL POSTGRAD SCHOOL	1,202	1,114	997	699	1,202	1,079	997	699
50 SUNY AT STONY BROOK	1,190	1,182	977	900	826	807	755	641
TOTAL, 1ST 50 INSTS.	230,243	196,512	180,275	155,324	173,827	148,771	133,957	113,951

SEE FOOTNOTES AT END OF TABLE.

TABLE B-90. — R&D EXPENDITURES IN MATHEMATICAL AND COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 UNIVERSITY OF FLORIDA	1,064	1,055	812	449E	631	656	406	239E
52 UNIVERSITY OF IOWA	1,049	1,497	1,240	967	297	384	381	369
53 UNIVERSITY OF DAYTON	984	1,439	2,259I	2,178	871	1,254	2,134I	2,018
54 UNIVERSITY OF ARIZONA	984	1,174	1,160	802	868	789	810	549
55 MICHIGAN STATE UNIVERSITY	949	899	895	678	672	630	574	491
56 UNIVERSITY OF CHICAGO	934E	853E	1,258E	1,103E	805	749	1,166	1,002
57 UNIV OF CAL LOS ANGELES 1/	933	976	765	660	901	936	751	628
58 INDIANA UNIVERSITY	905	988	939	591	659	643	740	408
59 UNIVERSITY OF VIRGINIA	857	606	570	369	648	506	551	365
60 SAN DIEGO STATE UNIV	856	158	71	40	763	133	61	39
TOTAL, 1ST 60 INSTS.	239,758	206,157	190,244	163,161	180,942	155,451	141,521	120,059
61 RENSSELAER POLYTECH INST	813	771	723	563	424	447	427	349
62 ROCKEFELLER UNIVERSITY	726	1,120	1,200	1,156	297	396	334	214
63 CLEMSON UNIVERSITY	722	401	332	182	575	354	242	143
64 UNIV OF ARK PINE BLUFF	720I	[illegible]	462	510	0I	0	0	0
65 UNIVERSITY OF CONNECTICUT	718	672	799	725	385	366	467	433
66 SUNY AT BUFFALO	700	770	861	775	502	463	580	462
67 UNIVERSITY OF COLORADO	697	597	968	690	662	567	814	482
68 SYRACUSE UNIVERSITY	697	745	948	1,125	476	401	704	849
69 OREGON STATE UNIVERSITY	695	576	1,028	776	261	244	364	230
70 COLORADO STATE UNIVERSITY	689	1,026	794	649	492	481	587	447
TOTAL, 1ST 70 INSTS.	246,935	213,492	198,359	170,312	185,016	159,170	146,040	122,670
71 DUKE UNIVERSITY	685	369I	381	408	538	322I	283	257
72 VA POLYTECH INST & ST U	684	522	408	344	616	450	351	295
73 LEHIGH UNIVERSITY	682	786	745	697	221	397	359	368
74 UNIV OF P R-RIO PIEDRAS	639I	595I	561I	498I	315I	300I	288I	261I
75 SUNY AT BINGHAMTON	630	419	262	187	268	284	201	144
76 COLLEGE OF WILLIAM & MARY	617I	445E	476	239I	493I	327E	309	227I
77 TENNESSEE STATE UNIV	611I	590I	536E	33I	367I	368I	334E	0
78 UNIV OF ILL CHICAGO 2/	609	1,032	822	769	497	527	409	420
79 UNIVERSITY OF NEW MEXICO	609I	551	178	119	275I	262	129	97
80 UNIV OF CAL IRVINE 1/	578	719	181	344	548	671	178	142
TOTAL, 1ST 80 INSTS.	253,275	219,480	202,909	173,750	189,154	163,078	148,881	125,981
81 RICE UNIVERSITY	565I	536I	510I	437	467I	444I	423I	363
82 BRANDEIS UNIVERSITY	532	782	263	231	356	293	263	231
83 TEXAS A & M UNIVERSITY	527	1,245	430	546	502	1,187	397	480
84 DENISON UNIVERSITY	519I	528I	528I	478E	189I	186I	186I	196E
85 UNIVERSITY OF DELAWARE	514	438	343	373	351	290	288	300
86 FLORIDA A & M UNIVERSITY	513I	487I	8I	0	13I	13I	23	0
87 NORTHERN ILLINOIS UNIV	512E	484	675	627	273	271	195	194
88 LOMA LINDA UNIVERSITY	500I	474E	455I	779E	374I	356E	346I	593E
89 BOSTON UNIVERSITY	477	267	162	97	394	267	162	97
90 NORTHWESTERN UNIVERSITY	454	361	295	361	437	358	285	349
TOTAL, 1ST 90 INSTS.	258,388	225,082	206,459	177,679	192,510	166,743	151,449	128,784
91 UNIV OF ARK FAYETTEVILLE	454	465	278E	36E	127	121	63E	9
92 UNIV OF NEBRASKA-LINCOLN	451E	451	308	244	97E	97	45	44
93 UNIV OF MAINE ORONO	425	159	80	146	116	159	48	64
94 UNIV OF SOUTH CAROLINA	424	476	257I	219	221	286	68I	61E
95 UNIVERSITY OF MIAMI	397	187	154	130	279	135	114	93
96 UNIVERSITY OF DENVER	395I	374	190I	162	273I	260	158I	137
97 DREXEL UNIVERSITY	386	274	261	379	339	226	254	303
98 ARIZONA STATE UNIVERSITY	380	437	176	31	247	247	135	27
99 U TENNESSEE KNOXVILLE	362I	337	153I	137I	284I	271	167I	122I
100 WASHINGTON STATE UNIV	350	1,000	196	170	350	998	170	144
TOTAL, 1ST 100 INSTS.	262,412	229,242	208,742	179,333	194,843	169,543	152,671	129,788
TOTAL, ALL OTHER INSTS.	15,826	15,483	13,286	13,403	9,249	9,384	8,611	8,157

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-51. — R&D EXPENDITURES IN MATHEMATICS AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	101,347	96,142	89,008	78,585	75,256	72,015	67,835	61,028
1 JOHNS HOPKINS UNIVERSITY	14,895E	13,908	13,071	12,414	14,805E	13,900	13,050	12,398
2 NEW YORK UNIVERSITY	4,527	4,435	3,621	3,777	4,193	4,362	3,560	3,646
3 UNIV OF WIS-MADISON	4,249	3,734	3,814	3,768	3,140	2,985	2,930	2,756
4 IOWA ST U OF SCI & TECH	3,075	2,411	1,379	1,265	1,776	1,262	413	435
5 UNIV OF CAL BERKELEY 1/	2,940	2,609	1,891	1,662	2,637	2,406	1,765	1,582
6 U TEXAS SYSTEM CANCER CTR	2,203	2,191	2,328	2,119	1,459	1,536	1,708	1,556
7 PRINCETON UNIVERSITY	1,977	1,650	1,305	1,554	1,352	1,122	961	1,089
8 LOUISIANA STATE UNIV	1,896	1,826	1,088	958	227	166	123	99
9 MASS INST OF TECHNOLOGY	1,870	1,603	1,427	1,123	1,861	1,595	1,422	1,162
10 UNIVERSITY OF MINNESOTA	1,770	1,217	1,030	1,242	1,424	958	829	777
TOTAL, 1ST 10 INSTS.	39,402	35,584	30,954	29,922	32,874	30,292	26,761	25,500
11 BOSTON COLLEGE	1,768	0	2,137	1,863	1,756	0	2,027	1,743
12 GEORGE WASHINGTON UNIV	1,721	1,928	2,213	1,124	1,668	1,648	1,654	757
13 ST JOHN'S UNIVERSITY (NY)	1,707E	1,607	1,564	1,291	0	0	0	0
14 RUTGERS THE ST UNIV OF NJ	1,682	1,319	1,283	1,129	1,013	916	939	811
15 BROWN UNIVERSITY	1,575	1,555	1,494	1,300	1,555	1,550	1,491	1,300
16 UNIV OF WEST FLORIDA	1,463	1,044	321	140	1,153	802	244	84
17 PENNSYLVANIA STATE UNIV	1,203	889	784	390	432	435	375	209
18 OHIO STATE UNIVERSITY	1,171E	649	606	566	424E	455	487	429
19 PURDUE UNIVERSITY	1,138	964	198	336	1,027	918	166	311
20 FLORIDA STATE UNIVERSITY	1,120	1,224	994	849	594	742	488	420
TOTAL, 1ST 20 INSTS.	53,950	46,765	42,548	38,910	42,496	37,758	34,632	31,564
21 HARVARD UNIVERSITY	1,097E	883E	984E	931E	831	672	745	705
22 STANFORD UNIVERSITY	1,043	3,446	3,244	3,081	970	2,699	2,773	2,567
23 UNIVERSITY OF MICHIGAN	1,008	864	883	639	636	717	818	579
24 UNIV OF MD COLLEGE PARK	970	809	510	420	630	527	450	380
25 N C STATE UNIV AT RALEIGH	950	1,104I	1,000	772	209	334I	290	264
26 UNIVERSITY OF CHICAGO	934E	853E	1,258E	1,103E	805	749	1,166	1,002
27 WASHINGTON UNIVERSITY	926	906E	976	714	896	906	877	688
28 UNIVERSITY OF GEORGIA	918	666	667	575	152	91	118	105
29 UNIV OF PENNSYLVANIA	907	983	1,353	936	878	560	771	769
30 UNIV OF NC AT CHAPEL HILL	902	643	468	354	882	636	468	354
TOTAL, 1ST 30 INSTS.	63,605	57,927	53,891	48,435	49,393	45,649	43,108	38,977
31 UNIV OF SOUTHERN CAL	891	558	499	141	265	81	117	111
32 UNIVERSITY OF FLORIDA	884	723	553	182E	529	486	224	89E
33 UNIV OF ILL URBANA	884	1,025	825	1,026	636	733	728	887
34 CORNELL UNIVERSITY	871	554E	599	533	817	501	599	533
35 UNIV OF CAL LOS ANGELES 1/	856	747	633	574	824	708	619	552
36 UNIVERSITY OF PITTSBURGH	824	715	1,113	1,184	671	641	603	587
37 RENSSELAER POLYTECH INST	813	771	723	563	424	447	427	349
38 COLUMBIA UNIV MAIN DIV	786	548	562	532	786	546	558	508
39 UNIVERSITY OF WASHINGTON	762	566	563	493	742	557	556	481
40 UNIV OF TEXAS AT AUSTIN	719	608	758	551	549	506	675	461
TOTAL, 1ST 40 INSTS.	71,895	64,742	60,719	54,214	55,636	50,855	48,214	43,535
41 UNIV OF CAL SANTA BARBARA 1/	693	781	459	350	411	443	387	288
42 CARNEGIE-MELLON UNIV	658	853	670	660	653	796	653	636
43 INDIANA UNIVERSITY	643	650	578	455	431	410	417	301
44 UNIV OF ILL CHICAGO 2/	609	1,032	822	769	497	527	409	420
45 GEORGIA INSTITUTE OF TECH	605	660	701	512	361	357	389	297
46 LEHIGH UNIVERSITY	553	576	540	503	212	289	233	249
47 UNIVERSITY OF DAYTON	538	740	1,687I	1,626	476	646	1,594I	1,507
48 TEXAS A & M UNIVERSITY	527	1,245	430	546	502	1,187	397	480
49 UNIVERSITY OF UTAH	511	427	411	393	425	411	396	368
50 SUNY AT STONY BROOK	510	630	627	644	354	430	484	459
TOTAL, 1ST 50 INSTS.	77,742	72,336	67,644	60,672	59,958	56,351	53,573	48,540

SEE FOOTNOTES AT END OF TABLE.

TABLE B-51. — R&D EXPENDITURES IN MATHEMATICS AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

— CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 FLORIDA A & M UNIVERSITY	500I	474I	66	0	0I	0I	0	0
52 UNIV OF CAL SAN DIEGO 1/	480	450	399	389	456	432	391	382
53 NORTHERN ILLINOIS UNIV	479E	451	578	611	247	245	153	180
54 BOSTON UNIVERSITY	477	267	762	97	394	267	162	97
55 YALE UNIVERSITY	473	558	643	569	452	537	618	533
56 LOMA LINDA UNIVERSITY	466I	442E	400I	485E	349I	332E	323I	553I
57 UNIV OF MASS AT AMHERST	462	288	211	124	250	242	190	98
58 NORTHWESTERN UNIVERSITY	454	361	295	361	437	358	285	349
59 OREGON STATE UNIVERSITY	448	447	877	557	149	236	342	168
60 UNIV OF ARK, FAYETTEVILLE	435	453	278E	36E	127	121	63E	9
TOTAL, 1ST 60 INSTS.	82,416	76,527	71,553	64,101	62,819	59,121	56,100	50,909
61 SUNY AT BINGHAMTON	429	191	84	51	111	133	45	33
62 UNIVERSITY OF DELAWARE	422	329	283	342	268	202	241	285
63 MICHIGAN STATE UNIVERSITY	421	406	738	429	343	318	464	374
64 UNIV OF ARK PINE BLUFF	417I	357	310	324	0I	0	0	0
65 CLEMSON UNIVERSITY	403	401	332	182	263	354	242	143
66 UNIVERSITY OF DENVER	395I	374	190I	162	273I	260	158I	137
67 TENNESSEE STATE UNIV	357I	352I	320E	9I	291I	292I	265E	0
68 BRANDEIS UNIVERSITY	356	293	263	231	3[illegible]	293	263	231
69 SUNY AT BUFFALO	346	335	237	210	238	197	193	159
70 COLORADO STATE UNIVERSITY	346	344	469	380	245	228	309	213
TOTAL, 1ST 70 INSTS.	86,308	79,909	74,779	66,421	65,207	61,398	58,280	52,484
71 UNIV OF SOUTH CAROLINA	335	386	257I	219E	194	223	68I	62E
72 CALIFORNIA INST OF TECH	332	257	257	236	318	252	227	213
73 UNIVERSITY OF CONNECTICUT	330	262	232	232	177	142	137	138
74 UNIVERSITY OF ARIZONA	321	428	447	406	284	234	262	232
75 UNIV OF CAL RIVERSIDE 1/	320	302	364	297	67	54	81	81
76 KENT STATE UNIVERSITY	319	287	134I	59I	294	242	105I	55I
77 UNIVERSITY OF OKLAHOMA	314	237	270	65	76	73	39	33
78 UNIVERSITY OF IOWA	295	685	570	347	151	185	148	118
79 RICE UNIVERSITY	286I	272I	260I	223	282I	268I	256I	220
80 YESHIVA UNIVERSITY	260	251	79I	66	64	62	76I	59
TOTAL, 1ST 80 INSTS.	89,420	83,276	77,649	68,571	67,114	63,133	59,679	53,694
81 UNIVERSITY OF NEW MEXICO	257I	235	145	112	141I	134	129	90
82 UNIVERSITY OF VIRGINIA	255	253	168	181	245	247	166	179
83 UNIV OF MISSOURI COLUMBIA	250	247	116	75	168	218	93	58
84 SAN DIEGO STATE UNIV	248	158	71	39	155	133	51	39
85 VA POLYTECH INST & ST U	247	200	173	142	227	174	142	114
86 CLARKSON COLLEGE OF TECH	245	212	143	210	208	198	125	181
87 U TENNESSEE KNOXVILLE	243I	226	127I	96I	191I	182	111I	81I
88 UNIVERSITY OF KENTUCKY	240	233	305	223	126	138	197	201
89 UNIVERSITY OF COLORADO	239	193	256	182	230	181	240	170
90 SOUTHERN METHODIST UNIV	227	170	92I	114	193	170	80I	100
TOTAL, 1ST 90 INSTS.	91,871	85,403	79,245	69,945	68,998	64,908	61,013	54,907
91 UNIV OF MAINE ORONO	225	159	80	64	116	159	48	64
92 CATHOLIC UNIV OF P R	225	239	236E	0	0	0	0	0
93 DREXEL UNIVERSITY	221	225	261	86	208	196	254	71
94 NORTHEASTERN UNIVERSITY	214I	202	138E	126I	127I	121	69E	74I
95 SAN JOSE STATE UNIVERSITY	207I	201I	85	64I	154I	154I	65	37I
96 KANS ST U - AG & APP SCI	203	239	122	48	156	220	111	31
97 CENTRAL WASHINGTON UNIV	202	0	15	39	0	0	15	0I
98 ROCKEFELLER UNIVERSITY	198	542	617	651	0	119	80	107
99 UNIVERSITY OF ROCHESTER	196	426	293	272	187	398	262	237
100 ILLINOIS INST OF TECH	187	118	74	0	187	99	74	0
TOTAL, 1ST 100 INSTS.	93,949	87,754	81,166	71,295	70,133	66,374	61,991	55,528
TOTAL, ALL OTHER INSTS.	7,398	8,388	7,842	7,290	5,123	5,641	5,848	5,500

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-52. — R&D EXPENDITURES IN THE COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	176,891	148,583	133,020	114,151	128,836	106,912	93,443	76,917
1 JOHNS HOPKINS UNIVERSITY	34,444E	32,345	31,962	29,604	34,312E	32,087	31,728	29,390
2 CARNEGIE-MELLON UNIV	15,087	10,581	9,802	5,263	10,822	8,426	7,004	4,270
3 NEW MEXICO STATE UNIV	10,118	7,723	252	155	8,410	6,642	165	96
4 STANFORD UNIVERSITY	9,596	6,767	4,702	4,032	7,861	5,533	4,316	3,839
5 MASS INST OF TECHNOLOGY	8,498	7,162	9,195	7,844	7,142	5,951	6,609	6,038
6 GEORGIA INSTITUTE OF TECH	6,375	4,791	4,214	3,776	3,808	2,592	2,337	2,188
7 UNIV OF ILL URBANA	5,847	5,828	4,692	4,358	2,865	2,841	2,139	1,532
8 PENNSYLVANIA STATE UNIV	4,933	4,229	4,013	4,085	356	205	218	235
9 UNIV OF TEXAS AT AUSTIN	3,980	3,001	2,444	2,445	2,182	1,180	981	963
10 UNIVERSITY OF OKLAHOMA	3,498	3,624	4,006	768	2,090	1,946	3,103	0
TOTAL, 1ST 10 INSTS.	102,376	86,051	75,302	62,330	79,848	67,403	[illegible]	48,551
11 YALE UNIVERSITY	3,391	2,160	1,226	1,447	2,889	1,769	1,128	1,334
12 WASHINGTON UNIVERSITY	2,982	2,919E	3,376	3,336	2,707	2,870	3,189	3,125
13 UNIV OF WIS-MADISON	2,750	2,150	969	842	2,193	1,842	679	492
14 UNIV OF SOUTHERN CAL	2,724	1,713	445	104	2,059	1,021	273	93
15 NEW YORK UNIVERSITY	2,326	2,038	1,327	1,227	2,326	2,037	1,327	1,132
16 UNIV OF MD COLLEGE PARK	2,263	1,215	5,265	4,696	1,905	1,061	1,598	1,425
17 UNIVERSITY OF MICHIGAN	2,039	1,572	1,481	1,033	497	204	145	194
18 IOWA ST U OF SCI & TECH	2,025	1,565	1,550	910	28	39	102	97
19 UNIVERSITY OF UTAH	2,005	1,229	1,047	920	1,504	693	432	896
20 UNIVERSITY OF GEORGIA	1,869	1,260	973	772	1,016	960	789	617
TOTAL, 1ST 20 INSTS.	126,750	103,872	92,961	77,617	96,972	79,899	68,262	57,656
21 UNIV OF MASS AT AMHERST	1,861	1,251	934	536	1,613	1,051	913	406
22 UNIV OF PENNSYLVANIA	1,851	2,179	3,344	2,529	1,193	1,525	2,464	1,620
23 CORNELL UNIVERSITY	1,831	2,089E	1,436	1,010	1,524	1,720	1,218	818
24 FLORIDA STATE UNIVERSITY	1,830	1,971	2,040	2,398	0	0	0	0
25 CALIFORNIA INST OF TECH	1,784	1,885	2,082	1,906	942	1,190	1,408	1,311
26 UNIV OF CAL SAN DIEGO 1/	1,779	1,457	1,074	316	1,281	1,205	988	48
27 COLUMBIA UNIV MAIN DIV	1,756	293	87	66	1,756	293	86	65
28 RUTGERS THE ST UNIV OF NJ	1,640	1,252	1,301	1,885	1,294	912	1,078	714
29 UNIVERSITY OF WASHINGTON	1,621	1,422	1,717	407	1,326	1,179	1,012	388
30 NEW YORK INST TECHNOLOGY	1,461	1,361I	1,264I	1,264	0	0I	0I	0
TOTAL, 1ST 30 INSTS.	144,164	119,032	108,240	89,934	107,901	88,974	77,429	63,026
31 HARVARD UNIVERSITY	1,244E	657E	705E	889E	942	498	534	673
32 BROWN UNIVERSITY	1,161	844	501	600	839	649	493	570
33 UNIVERSITY OF ROCHESTER	1,130	810	589	603	1,074	717	470	485
34 US NAVAL POSTGRAD SCHOOL	1,028	878	678	357	1,028	843	678	357
35 PURDUE UNIVERSITY	1,005	759	1,309	1,140	923	707	1,141	1,011
36 PRINCETON UNIVERSITY	786	529	383	348	619	425	271	286
37 ST JOHN'S UNIVERSITY (NY)	776E	776	800	712	0	0	0	0
38 UNIVERSITY OF IOWA	754	812	670	620	146	199	233	251
39 GEORGE WASHINGTON UNIV	726	780	526	430	627	392	514	424
40 SUNY AT STONY BROOK	680	352	390	256	472	377	271	182
TOTAL, 1ST 40 INSTS.	153,454	126,429	114,751	95,889	114,571	93,781	82,034	67,265
41 UNIVERSITY OF ARIZONA	663	746	713	396	584	555	548	317
42 N C STATE UNIV AT RALEIGH	629	131I	114	265	346	120I	104	151
43 COLLEGE OF WILLIAM & MARY	617I	445E	476	9I	493I	327E	309	9I
44 SAN DIEGO STATE UNIV	608	0	0	1	608	0	0	0
45 SYRACUSE UNIVERSITY	606	491	849	806	429	338	661	768
46 UNIVERSITY OF PITTSBURGH	604	610	645	605	183	204	209	124
47 UNIVERSITY OF VIRGINIA	602	353	402	188	403	259	385	186
48 UNIV OF CAL SANTA BARBARA 1/	581	260	293	310E	200	153	219	193E
49 UNIVERSITY OF MINNESOTA	568	550	334	156	468	423	251	125
50 DUKE UNIVERSITY	548	202I	234	270	424	155I	137	221
TOTAL, 1ST 50 INSTS.	159,480	130,217	118,811	98,895	118,709	96,315	84,857	69,359

SEE FOOTNOTES AT END OF TABLE.

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TABLE B-52. — R&D EXPENDITURES IN THE COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 UNIV OF P R-RIO PIEDRAS	547I	511I	482I	428I	283I	270I	259I	225I
52 UNIV OF CAL IRVINE 1/	536	660	96	78	506	612	93	76
53 ROCKEFELLER UNIVERSITY	528	578	587	505	297	277	254	109
54 MICHIGAN STATE UNIVERSITY	528	493	157	249	329	312	110	117
55 DENISON UNIVERSITY	519I	528I	528I	478E	189I	186I	186I	196E
56 UNIV OF NC AT CHAPEL HILL	486	659	903	390	433	593	699	357
57 OHIO STATE UNIVERSITY	476E	570	688	684	446E	542	491	391
58 UNIVERSITY OF COLORADO	458	404	712	508	432	386	574	312
59 UNIVERSITY OF DAYTON	446	699	572I	552	395	608	540I	51[illegible]
60 VA POLYTECH INST & ST U	437	322	295	202	389	276	209	181
TOTAL, 1ST 60 INSTS.	164,441	1[illegible]5,641	123,767	102,969	122,408	100,377	88,272	71,844
61 UNIVERSITY OF CONNECTICUT	388	410	567	493	208	224	330	295
62 SUNY AT BUFFALO	354	435	624	565	264	266	387	303
63 UNIVERSITY OF NEW MEXICO	348I	316	33	7	134I	128	0	7
64 COLORADO STATE UNIVERSITY	343	682	325	269	247	253	278	234
65 UNIVERSITY OF MIAMI	327	146	109	71	219	99	69	42
66 CLEMSON UNIVERSITY	319	0	0	0	312	0	0	0
67 SOUTHERN ILL U-CARBONDALE	307	0	0	0	0	0	0	0
68 UNIV OF ARK PINE BLUFF	303I	260	152	186	0I	0	0	0
69 UNIV OF NEBRASKA-LINCOLN	299E	299	231	192	44E	44	9	21
70 INSTITUTE PAPER CHEMISTRY	296	285	0	69E	0	0	0	7E
TOTAL, 1ST 70 INSTS.	167,725	138,474	125,808	104,821	123,836	101,391	89,345	72,753
71 WASHINGTON STATE UNIV	290	883	10[illegible]	81	290	881	96	70
72 RICE UNIVERSITY	279I	264I	250I	214	185I	176I	167I	143
73 INDIANA UNIVERSITY	262	338	361	136	228	233	323	107
74 TENNESSEE STATE UNIV	254I	238I	216E	24I	76I	76I	69E	0
75 OREGON STATE UNIVERSITY	247	129	151	219	112	8	22	62
76 ARIZONA STATE UNIVERSITY	241	216	41	0	124	41	0	0
77 UNIV OF ALASKA FAIRBANKS	236	230	0	0	236	230	0	0
78 UNIV OF SOUTH FLORIDA	201	222E	119	0	181	222	98	0
79 SUNY AT BINGHAMTON	201	228	178	136	157	151	156	111
80 UNIV OF MAINE ORONO	200	0	0	82	0	0	0	0
TOTAL, 1ST 80 INSTS.	170,136	141,222	[illegible]7,225	105,713	125,425	103,409	90,276	73,24[illegible]
81 UNIVERSITY OF FLORIDA	180	332	259	267E	102	170	182	150E
82 UNIV OF CAL SANTA CRUZ 1/	176	70	65	150	166	59	58	136
83 BRANDEIS UNIVERSITY	176	489	0	0	0	0	0	0
84 N J INST OF TECHNOLOGY	173	257	320	424	115	195	313	424
85 CUNY BERNARD BARUCH COL	169I	162I	145I	127I	0I	0I	0I	0I
86 CUNY HUNTER COLLEGE	169	13	148	0	0	0	100	0
87 DREXEL UNIVERSITY	165	49	0	293	131	30	0	232
88 CALIF ST COL STANISLAUS	160	43	0	0	0	0	0	0
89 INSTITUTE OF TEXTILE TECH	149I	141I	131I	118I	0I	0I	0I	0I
90 CUNY CITY COLLEGE	147	135	80	65	147	135	75	65
TOTAL, 1ST 90 INSTS.	171,800	142,913	128,373	107,157	126,086	103,998	91,004	74,253
91 LOUISIANA STATE UNIV	133	126	141	71	24	18	0	0
92 LEHIGH UNIVERSITY	129	210	205	194	9	108	126	119
93 SUNY AT ALBANY	123	111	132	55E	86	111	132	52
94 GEORGIA STATE UNIVERSITY	122	16	14	3	0	0	0	0
95 MANKATO STATE UNIVERSITY	121	99	0	0	90	60	0	0
96 VANDERBILT UNIVERSITY	120	81	163	57	92	61	136	0
97 SOUTHERN METHODIST UNIV	120	91	102I	127	117	99	727	89
98 U TENNESSEE KNOXVILLE	119I	111	56I	41I	93I	89	5[illegible]	41I
99 UNIV OF SOUTHWESTERN LA	114	85	137	54	46	12	2	1
100 UNIV OF MISSOURI ROLLA	108	102	24	101	52	74	16	84
TOTAL, 1ST 100 INSTS.	173,009	143,945	129,347	107,860	126,695	104,621	91,544	74,639
TOTAL, ALL OTHER INSTS.	3,882	4,638	3,673	6,291	2,141	2,291	1,899	2,278

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-53. — R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	LIFE SCIENCES TOTAL							
	1983	1982	1981	1980	AGRICULTURAL SCIENCES	BIOLOGICAL SCIENCES	MEDICAL SCIENCES	OTHER
TOTAL, ALL INSTITUTIONS	4,209,679	3,972,650	3,674,151	3,217,773	892,857	1,391,972	1,798,086	126,764
1 UNIVERSITY OF MINNESOTA	117,513	110,734	99,508	90,672	39,401	15,447	62,145	520
2 UNIV OF WIS-MADISON	95,128	88,011	80,480	73,374	15,913	31,787	46,360	1,068
3 UNIV OF CAL DAVIS 1/	91,394	82,542	77,538	58,287	56,030	13,991	21,373	0
4 CORNELL UNIVERSITY	89,264E	83,262E	70,385	62,421	24,093	26,954E	38,217E	0E
5 UNIV OF CAL SAN FRANCISCO 1/	89,247	95,282	89,209	70,400	0	0	89,247	0
6 HARVARD UNIVERSITY	85,549E	81,515E	76,368	66,599E	0	57,620E	27,929E	0
7 UNIVERSITY OF WASHINGTON	79,340	80,166	77,465	70,582	9,614	21,377	46,377	1,972
8 YALE UNIVERSITY	75,944	68,690	63,677	53,859	482	31,968	43,303	191
9 UNIV OF PENNSYLVANIA	73,808	72,246	65,160	58,766	0	31,011	41,766	1,031
10 JOHNS HOPKINS UNIVERSITY	73,637E	73,814	73,228	70,077	0	23,747E	39,944E	9,946E
TOTAL, 1ST 10 INSTS.	870,824	836,262	773,008	675,037	145,533	253,902	456,661	14,728
11 UNIV OF CAL LOS ANGELES 1/	69,078	61,354	58,139	51,424	0	7,267	61,666	145
12 STANFORD UNIVERSITY	68,475	60,363	52,525	46,776	0	4,607	63,364	504
13 COLUMBIA UNIV MAIN DIV	65,645	68,249	62,076	58,219	0	19,270	46,375	0
14 UNIVERSITY OF MICHIGAN	62,243	58,707	57,840	50,661	0	31,769	23,942	6,532
15 TEXAS A & M UNIVERSITY	57,346	53,222	45,162	38,118	48,323	2,837	5,618	568
16 WASHINGTON UNIVERSITY	57,342	56,523	50,091	47,803	0	20,005	37,274	63
17 MICHIGAN STATE UNIVERSITY	56,487	51,066	46,181	50,566	34,306	16,081	5,545	555
18 BAYLOR COL OF MEDICINE	54,986	48,661	44,733	37,908	0	21,357	33,629	0
19 NEW YORK UNIVERSITY	53,756	50,185	48,079	42,881	0	12,663	36,143	4,950
20 YESHIVA UNIVERSITY	53,297	51,736	44,951I	42,272	0	14,124	27,555	11,618
TOTAL, 1ST 20 INSTS.	1,469,479	1,396,328	1,282,785	1,141,665	228,162	403,882	797,772	39,663
21 UNIVERSITY OF GEORGIA	51,228	47,258	44,003	41,341	37,527	14,634	[illegible],067	0
22 UNIV OF CAL BERKELEY 1/	50,186	43,918	44,211	35,686	25,533	16,965	7,688	0
23 UNIVERSITY OF CHICAGO	49,414E	45,285E	41,528E	37,570E	0	23,325E	14,311E	1,778E
24 LOUISIANA STATE UNIV	47,518	44,567	38,690	34,525	29,868	9,687	7,963	0
25 UNIVERSITY OF FLORIDA	46,286	42,922	36,523	32,868E	15,407	16,625	12,445	1,809
26 UNIVERSITY OF COLORADO	45,619	35,931E	35,558E	34,530	0	18,179	26,198	1,242
27 DUKE UNIVERSITY	45,335	41,384I	38,387	31,395	763	18,454	23,783	2,435
28 ROCKEFELLER UNIVERSITY	44,291	37,643	33,159	30,163	0	41,914	2,377	0
29 UNIV OF CAL SAN DIEGO 1/	44,106	53,998	53,303	39,681	0	6,442	37,664	0
30 UNIVERSITY OF ROCHESTER	43,248	42,167	41,042	38,917	0	17,814	23,670	1,764
TOTAL, 1ST 30 INSTS.	1,936,710	1,831,401	1,689,189	1,498,341	332,260	587,921	967,838	48,691
31 UNIVERSITY OF ARIZONA	42,105	41,637	37,348	29,390	13,074	12,116	16,870	45
32 SUNY AT BUFFALO 2/	41,207	1[illegible],973	17,321	15,511	0	25,012	15,920	275
33 U TEXAS SYSTEM CANCER CTR	40,232	36,373	35,045	30,202	0	9,870	27,631	2,731
34 UNIVERSITY OF CONNECTICUT	39,914	38,457	33,866	30,450	162	20,407	18,925	420
35 UNIV OF SOUTHERN CAL	39,578	46,079	41,241	35,939	0	3,338	36,240	0
36 UNIVERSITY OF IOWA	38,969	36,312	34,585	31,220	0	10,919	27,433	617
37 OREGON STATE UNIVERSITY	37,808	35,381	31,890	27,148	24,865	9,864	1,676	1,403
38 OHIO STATE UNIVERSITY	36,810E	45,823	44,351	38,998	11,506E	11,872E	10,180E	3,252E
39 UNIV OF NC AT CHAPEL HILL	36,806	31,747	32,925	27,897	0	21,254	14,848	704
40 N C STATE UNIV AT RALEIGH	36,768	37,343I	33,850	28,519	27,139	9,420	209	0
TOTAL, 1ST 40 INSTS.	2,326,907	2,199,526	2,031,611	1,793,615	409,006	721,993	1,137,770	58,138
41 IOWA ST U OF SCI & TECH	36,660	31,733	28,008	26,983	20,545	12,481	2,385	1,249
42 U TEX HLTH SCI CTR DALLAS	36,456	32,058	29,868	26,567	0	15,567	20,889	0
43 PURDUE UNIVERSITY	36,077	31,251	33,609	28,716	15,457	16,174	4,446	0
44 UNIV OF MISSOURI COLUMBIA	34,471	33,240	33,446	27,879	14,636	11,193	8,642	0
45 UNIVERSITY OF PITTSBURGH	33,229	32,495	23,353	17,583	0	3,340	25,415	4,474
46 UNIV OF CAL RIVERSIDE 1/	31,942	31,739	30,945	19,733	26,879	3,788	1,275	0
47 UNIVERSITY OF MIAMI	31,196	33,737	32,228	26,707	0	9,322	21,870E	4E
48 UNIV ALABAMA BIRMINGHAM	30,952	35,617	33,571	30,624	0	6,082	24,188	682
49 PENNSYLVANIA STATE UNIV	30,772	28,391	28,862	26,245	14,373	10,960	5,127	312
50 UNIVERSITY OF KENTUCKY	30,318	28,773	26,046	22,311	18,985	987	6,460	3,886
TOTAL, 1ST 50 INSTS.	2,658,980	2,518,500	2,331,546	2,046,963	519,881	811,887	1,258,467	68,745

SEE FOOTNOTES AT END OF TABLE.

TABLE B-53. — R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	LIFE SCIENCES TOTAL				AGRI-CULTURAL SCIENCES	BIO-LOGICAL SCIENCES	MEDICAL SCIENCES	OTHER
	1983	1982	1981	1980				
51 NORTHWESTERN UNIVERSITY	29,203	26,675	25,223	25,584	0	10,680	16,662	1,861
52 MISSISSIPPI STATE UNIV	28,799	27,345	26,383	22,935	28,322	392	0	85
53 CUNY MT SINAI SCH OF MED	28,561	29,797	28,794	26,696	0	7,233	21,328	0
54 UNIV OF ILL URBANA	29,212	25,595	28,970	26,237	14,070	10,060	3,451	631
55 UNIVERSITY OF UTAH	28,053	25,837	25,306	20,396	0	14,242	13,811	0
56 UNIV OF NEBRASKA-LINCOLN	28,051E	27,276	26,359	19,536	22,847E	2,845E	2,359E	0
57 CASE WESTERN RESERVE UNIV	27,131	26,911	26,864	26,164	0	10,318	16,813	0
58 UNIV OF ILL CHICAGO 3/	27,083	19,831I	17,702	15,759	0	9,919	13,931	3,233
59 MASS INST OF TECHNOLOGY	26,489	26,191	24,024	20,651	0	26,268	221	0
60 BOSTON UNIVERSITY	26,222	26,172	24,557	20,250	0	1,278	24,944	0
TOTAL, 1ST 60 INSTS.	2,936,784	2,779,130	2,585,443	2,271,171	685,120	905,122	1,371,987	74,555
61 WASHINGTON STATE UNIV	26,200	24,473	22,135	23,663	21,777	2,023	2,400	0
62 OKLAHOMA STATE UNIVERSITY	26,103I	24,182I	21,076I	13,342I	16,763I	6,502I	2,838I	0
63 VIRGINIA COMMONWLTH UNIV	24,808I	21,171	19,320	17,710	0	11,322I	13,094I	392I
64 U TEX HLTH SCI CTR S ANTO	24,743	19,341	17,251	13,972	0	10,323	14,420	0
65 INDIANA UNIVERSITY	24,536	23,130	18,385	16,039	0	7,903	16,566	67
66 UNIV OF CAL IRVINE 1/	23,724	20,874	20,481	15,990	0	5,765	17,959	0
67 UNIVERSITY OF CINCINNATI	23,341	23,297	26,259	24,737	0	9,395	13,791	155
68 EMORY UNIVERSITY	22,244	19,779	17,411	14,672	0	6,589	11,715	3,940
69 KANS ST U - AG & APP SCI	21,807	21,195	18,700	16,001	16,690	4,401	716	0
70 RUTGERS THE ST UNIV OF NJ	21,546	17,242	14,478	13,785	9,330	11,842	374	0
TOTAL, 1ST 70 INSTS.	3,175,836	2,993,813	2,780,939	2,441,082	649,680	981,187	1,465,860	79,109
71 COLORADO STATE UNIVERSITY	21,527	25,613	26,087	20,326	9,638	10,153	1,736	0
72 UNIVERSITY OF VIRGINIA	21,401	18,471	16,415	14,869	0	9,819	11,519	63
73 AUBURN UNIVERSITY	21,244	20,547	20,487	16,636	20,601	0	0	643
74 VA POLYTECH INST & ST U	21,012	20,772	19,419	17,437	18,555	1,606	851	0
75 TULANE UNIVERSITY	20,914	16,292	16,706	10,895	0	3,276	13,167	4,471
76 VANDERBILT UNIVERSITY	20,398	20,371	19,821	17,245	0	10,718	7,478	2,202
77 TEMPLE UNIVERSITY	19,784	18,521	15,149E	14,839E	0	10,721	9,063	0
78 U TEX MED BRNCH GALVESTON	19,011	18,272	17,612	11,041	0	6,047	5,944	7,020
79 UNIV OF MED & DENT OF N J	18,831I	16,123	14,589	11,394	0	8,922I	9,905I	0
80 SUNY AT STONY BROOK	18,741	17,045	14,370	11,704	0	10,693	7,837	211
TOTAL, 1ST 80 INSTS.	3,378,699	3,185,840	2,961,594	2,593,468	698,474	1,053,146	1,533,360	93,719
81 U TEX HLTH SCI CTR HOUSTN	18,028	17,487	13,706	10,888	0	9,015	8,615	398
82 UNIV OF VT & ST AGRIC COL	16,752	16,666	16,449	14,062	2,770	6,517	6,305	1,160
83 UNIVERSITY OF NEW MEXICO	16,546I	15,292	12,027	12,638	0	3,741I	12,805I	0
84 NORTH DAKOTA STATE UNIV	16,190	16,911	14,253	12,277	5,484	10,706	0	0
85 SUNY UPSTATE MEDICAL CTR	15,756	14,476	6,345I	6,345E	0	6,211	9,545	0
86 WAYNE STATE UNIVERSITY	15,658	13,909	15,016	13,382	0	6,950	7,660	1,048
87 THOMAS JEFFERSON UNIV	15,580	9,345	10,265	9,532E	0	1,752	8,205	5,623
88 CLEMSON UNIVERSITY	15,436	14,380	11,902E	12,030	13,516	1,886	25	9
89 OREGON HLTH SCIENCES UNIV	15,419	16,876	11,406I	12,753	0	4,467	10,937	15
90 UNIV OF P R-MAYAGUEZ	15,280I	14,183I	13,340I	11,793	14,697I	367I	0	216I
TOTAL, 1ST 90 INSTS.	3,539,344	3,335,365	3,086,303	2,709,748	734,941	1,104,758	1,597,457	102,188
91 UNIV OF HAWAII-MANOA	15,020E	14,602	14,598	15,519	5,780E	5,110E	1,132E	2,998E
92 UNIVERSITY OF OKLAHOMA	14,829	10,809	11,681	7,213	0	9,462	5,327E	40E
93 UNIV OF ARK FAYETTEVILLE	14,762	17,015	7,530E	6,419E	14,529	233	0	0
94 GEORGETOWN UNIVERSITY	14,651	14,921E	14,784E	10,615	0	5,210	7,966	1,475
95 UNIV OF MD BALT PROF SCH	14,539I	13,501I	12,703E	15,019	0	6,885I	7,481I	173I
96 MONTANA STATE UNIVERSITY	14,169	10,590	10,152	8,365	6,441	7,728	0	0
97 UNIVERSITY OF IDAHO	13,610	13,322	16,056	10,214	11,829	1,260	521	0
98 UTAH STATE UNIVERSITY	13,585	13,196	11,208	9,716	10,100	3,485	0	0
99 MEDICAL COLLEGE OF WIS	13,453I	12,741I	11,849I	10,655	0	3,104I	10,349I	0
100 SUNY DOWNSTATE MED CTR	13,072	12,510	13,533	10,799	0	5,060	6,041	1,971
TOTAL, 1ST 100 INSTS.	3,681,034	3,468,472	3,210,397	2,813,802	783,624	1,152,295	1,636,274	108,845
TOTAL, ALL OTHER INSTS.	528,645	504,178	463,754	403,971	109,237	239,677	161,812	17,919

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ BEGINNING IN FY 1983, INCLUDES DATA FOR ROSWELL PARK MEMORIAL INSTITUTE, FORMERLY CLASSIFIED AS A NONPROFIT INSTITUTION.

3/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-84. — FEDERALLY FINANCED R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	LIFE SCIENCES TOTAL				AGRI-CULTURAL	BIO-LOGICAL	MEDICAL	
	1983	1982	1981	1980	SCIENCES	SCIENCES	SCIENCES	OTHER
TOTAL, ALL INSTITUTIONS	2,568,514	2,494,148	2,363,459	2,093,749	263,939	983,822	1,245,146	77,556
1 UNIV OF CAL SAN FRANCISCO 1/	67,035	75,534	72,522	58,202	0	0	67,035	0
2 HARVARD UNIVERSITY	64,791	61,776	57,838	50,412	0	43,639	21,152	0
3 YALE UNIVERSITY	64,602	57,617	56,038E	48,367	200	28,043	36,199	160
4 UNIVERSITY OF MINNESOTA	62,478	61,989	54,674	50,061	9,973	12,612	39,548	345
5 JOHNS HOPKINS UNIVERSITY	62,118E	64,232	64,107	61,481	0	20,132E	34,878E	7,108
6 UNIVERSITY OF WASHINGTON	61,289	63,978	63,369	57,659	5,875	19,140	34,722	1,552
7 COLUMBIA UNIV MAIN DIV	59,107	61,510	53,575	47,418	0	17,607	41,500	0
8 STANFORD UNIVERSITY	55,938	48,085	47,469	43,328	0	3,873	52,065	0
9 UNIV OF PENNSYLVANIA	53,048	53,147	51,248	44,947	0	26,481	25,805	762
10 UNIV OF WIS-MADISON	52,883	52,429	49,765	45,391	6,394	18,223	28,044	222
TOTAL, 1ST 10 INSTS.	603,289	600,299	573,805	507,266	22,442	129,750	380,948	10,149
11 UNIV OF CAL LOS ANGELES 1/	50,671	45,466	43,866	39,553	0	5,905	44,697	69
12 YESHIVA UNIVERSITY	45,828	44,493	40,280I	31,214	0	12,144	23,693	9,991
13 WASHINGTON UNIVERSITY	43,883	45,408	40,914	37,757	0	14,576	29,267	40
14 UNIVERSITY OF MICHIGAN	42,567	39,633	37,674	34,632	0	22,224	16,511	3,832
15 CORNELL UNIVERSITY	42,036E	43,327	39,440	34,392	6,336	13,316E	22,384E	0E
16 UNIVERSITY OF CHICAGO	40,095	37,217	35,504	31,639	0	19,686	18,757	1,612
17 DUKE UNIVERSITY	39,648	39,614I	34,725	29,219	488	16,633	20,590	1,937
18 UNIV OF CAL DAVIS 1/	37,909	37,149	34,966	29,344	15,604	4,554	17,747	0
19 NEW YORK UNIVERSITY	37,415	35,378	35,452	32,756	0	11,706	21,132	4,577
20 BAYLOR COL OF MEDICINE	36,772	35,852	34,054	31,211	0	15,204	21,568	0
TOTAL, 1ST 20 INSTS.	1,030,073	1,003,796	950,280	839,102	44,870	325,702	617,294	32,207
21 UNIV OF CAL SAN DIEGO 1/	36,489	42,244	42,446	35,129	0	5,699	30,790	0
22 UNIV OF NC AT CHAPEL HILL	33,450	28,536	28,129	24,233	0	19,445	13,695	350
23 SUNY AT BUFFALO 2/	32,966	12,665	12,121	10,302	0	21,352	11,377	237
24 UNIVERSITY OF ROCHESTER	30,817	31,151	29,374	27,688	0	14,221	15,600	996
25 UNIVERSITY OF IOWA	30,297	27,951	26,847	24,632	0	8,264	21,588	445
26 UNIV OF CAL BERKELEY 1/	29,004	24,984	25,457	23,282	8,987	13,368	6,649	0
27 UNIVERSITY OF COLORADO	28,900	27,971E	27,315E	26,399	0	13,514	14,303	1,083
28 U TEX HLTH SCI CTR DALLAS	26,561	25,121	23,890	20,852	0	11,996	14,565	0
29 MICHIGAN STATE UNIVERSITY	26,395	23,129	18,949	22,289	11,455	11,648	3,039	253
30 UNIV OF SOUTHERN CAL	26,001	26,167	23,454	21,642	0	2,282	23,719	0
TOTAL, 1ST 30 INSTS.	1,320,953	1,273,715	1,208,262	1,075,550	65,312	447,491	772,579	35,571
31 UNIV ALABAMA BIRMINGHAM	25,262	30,199	29,029	25,098	0	5,037	19,646	682
32 UNIVERSITY OF PITTSBURGH	25,313	24,233	18,467	14,202	0	2,789	19,860	2,664
33 UNIVERSITY OF CONNECTICUT	24,973	24,415	21,931	19,315	67	12,027	12,742	137
34 BOSTON UNIVERSITY	24,089	23,842	22,519	18,909	0	1,246	22,843	0
35 UNIVERSITY OF UTAH	23,867	22,011	22,204	17,946	0	12,839	11,028	0
36 CASE WESTERN RESERVE UNIV	22,413	21,282	20,383	18,483	0	8,535	13,876	0
37 UNIVERSITY OF ARIZONA	21,664	21,999	20,701	15,696	4,046	7,231	10,387	0
38 UNIVERSITY OF FLORIDA	21,402	21,309	17,975	14,790E	6,391	8,735	5,271	945
39 MASS INST OF TECHNOLOGY	21,276	21,212	19,495	16,170	0	21,065	211	0
40 VIRGINIA COMMONWLTH UNIV	20,939I	17,945	14,946	14,381	0	9,827I	10,902I	210I
TOTAL, 1ST 40 INSTS.	1,552,252	1,502,262	1,416,973	1,250,500	75,816	536,882	899,345	40,209
41 CUNY MT SINAI SCH OF MED	20,587	21,496	23,358	21,160	0	6,294	14,293	0
42 UNIVERSITY OF MIAMI	20,090	22,170	23,823	19,472	0	5,652	14,434	4
43 ROCKEFELLER UNIVERSITY	19,777	17,711	16,710	15,964	0	17,959	1,818	0
44 NORTHWESTERN UNIVERSITY	19,438	17,454	17,614	17,383	0	8,564	9,762	1,112
45 OHIO STATE UNIVERSITY	19,055E	21,263	22,363	18,853	5,065E	7,055E	4,423E	2,512E
46 PENNSYLVANIA STATE UNIV	18,932	18,308	17,434	16,016	5,947	9,354	3,362	269
47 UNIV OF CAL IRVINE 1/	18,531	16,511	15,929	13,516	0	5,122	13,409	0
48 EMORY UNIVERSITY	18,438	16,62[illegible]	14,670	12,657	0	6,123	8,417	3,898
49 OREGON STATE UNIVERSITY	17,542	18,94[illegible]	15,732	12,738	10,476	5,101	548	1,380
50 UNIVERSITY OF GEORGIA	17,238	16,500	15,681	13,654	6,363	9,622	1,253	0
TOTAL, 1ST 50 INSTS.	1,741,880	1,688,859	1,600,287	1,411,913	103,667	617,728	971,101	49,384

SEE FOOTNOTES AT END OF TABLE.

TABLE B-54. — FEDERALLY FINANCED R&D EXPENDITURES IN THE LIFE SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING		TRENDS			1983 SCIENCE FIELDS			
		LIFE SCIENCES TOTAL			AGRI-CULTURAL	BIO-LOGICAL	MEDICAL	
	1983	1982	1981	1980	SCIENCES	SCIENCES	SCIENCES	OTHER
51 TEXAS A & M UNIVERSITY	16,798	17,066	16,426	12,970	11,655	2,142	2,940	61
52 VANDERBILT UNIVERSITY	16,507	16,534	16,196	14,259	0	8,818	5,768	1,921
53 UNIVERSITY OF VIRGINIA	16,302	15,179	14,032	13,105	0	8,667	7,587	48
54 UNIVERSITY OF CINCINNATI	16,224	16,110	14,822	13,705	0	7,122	9,022	80
55 PURDUE UNIVERSITY	16,133	15,445	15,028	13,604	4,611	9,189	2,333	0
56 U TEX HLTH SCI CTR S ANTO	16,005	13,319	11,887	10,158	0	7,230	8,775	0
57 UNIV OF ILL URBANA	15,683	12,888	15,070	16,128	4,448	8,377	2,455	408
58 UNIV OF ILL CHICAGO 3/	14,909	13,800I	13,229	11,137	0	6,438	7,469	1,005
59 TEMPLE UNIVERSITY	14,327	13,860	11,983	11,333	0	8,676	5,651	0
60 INDIANA UNIVERSITY	14,011	14,303	12,849	11,237	0	5,936	8,070	5
TOTAL, 1ST 60 INSTS.	1,898,779	1,837,363	1,741,809	1,539,519	124,381	690,315	1,031,171	53,912
61 U TEX HLTH SCI CTR HOUSTN	13,731	13,964	10,718	8,493	0	7,838	5,563	330
62 SUNY AT STONY BROOK	13,006	11,641	10,493	8,265	0	7,421	5,439	146
63 COLORADO STATE UNIVERSITY	12,906	15,522	16,781	13,279	4,397	7,781	728	0
64 UNIV OF MD BALT PROF SCH	12,784I	12,1[illegible]	11,700E	13,253	0	6,794I	5,817I	173I
65 IOWA ST U OF SCI & TECH	12,698	11,132	9,376	9,368	5,783	6,235	260	420
66 UNIV OF MISSOURI COLUMBIA	12,551	12,420	12,845	10,608	3,527	6,042	2,982	0
67 U TEXAS SYSTEM CANCER CTR	12,543	15,025	16,288	15,851	0	2,914	9,151	478
68 LOUISIANA STATE UNIV	11,549	10,[illegible]41	9,958	7,913	740	5,305	5,504	0
69 UNIV OF MED & DENT OF N J	11,456I	11,[illegible]25	10,207	9,195	0	6,419I	5,037I	0
70 UNIV OF VT & ST AGRIC COL	11,455	11,[illegible]85	12,003	10,412	1,276	4,930	4,612	637
TOTAL, 1ST 70 INSTS.	2,023,458	1,962,610	1,862,478	1,646,056	140,104	751,994	1,076,264	55,096
71 N C STATE UNIV AT RALEIGH	11,439	10,725I	9,312	8,451	8,558	2,778	103	0
72 UNIVERSITY OF NEW MEXICO	10,475I	9,973	10,632	11,032	0	2,352I	8,123I	0
73 U TEX MED BRNCH GALVESTON	10,428	10,632	11,349	10,387	0	4,595	4,196	1,637
74 TULANE UNIVERSITY	10,398	9,030	9,0[illegible]	7,006E	0	1,478	5,085	3,435
75 UNIVERSITY OF KENTUCKY	10,187	11,132	10,325	9,499	6,604	598	2,985	0
76 DARTMOUTH COLLEGE	10,009	9,514	9,425	6,400	0	824	9,185	0
77 OREGON HLTH SCIENCES UNIV	9,910	9,279	7,860I	8,755	0	3,452	6,444	14
78 TUFTS UNIVERSITY	9,634I	9,166I	8,767I	8,430	0	5,124I	4,510I	0
79 GEORGE WASHINGTON UNIV	9,433	9,203	7,787	9,304	0	3,571	5,417	445
80 SUNY DOWNSTATE MED CTR	9,100	8,467	9,219	7,358	0	3,491	4,229	1,380
TOTAL, 1ST 80 INSTS.	2,124,471	2,059,741	1,956,240	1,732,378	155,2[illegible]	780,657	1,126,541	62,007
81 UNIVERSITY OF IDAHO	9,023	9,588	6,664	4,575	7,562	1,073	388	0
82 GEORGETOWN UNIVERSITY	8,892	9,749	9,335	7,574	0	3,621	4,013	1,258
83 WAYNE STATE UNIVERSITY	8,524	8,816	9,251	8,651	0	4,356	3,666	502
84 MEDICAL COLLEGE OF WIS	8,136I	7,741I	7,404I	6,664	0	2,199I	5,937I	0
85 MED UNIV OF SO CAROLINA	7,629	7,420	6,950	6,774	0	4,710	2,909	10
86 ALBANY MEDICAL COLLEGE	7,521I	7,251	5,678	5,351	0	2,960I	4,661I	0
87 UNIV OF CAL RIVERSIDE 1/	7,584	8,543	8,699	5,352	4,574	1,869	1,141	0
88 WASHINGTON STATE UNIV	7,264	7,443	5,845	8,217	3,614	1,711	1,939	0
89 UNIV TENN CTR HEALTH SCI	7,188	6,995	7,831	8,182	0	2,886	4,079	223
90 U MASS MED SCHL WORCESTER	7,070I	6,731	5,200	2,404	0	5,512I	1,556I	0
TOTAL, 1ST 90 INSTS.	2,213,402	2,140,010	2,029,097	1,796,122	171,016	811,554	1,156,832	64,000
91 UNIF SERV UNIV OF HLTH SC	6,997	4,[illegible]43	3,688	2,853	0	0	6,997	0
92 CALIFORNIA INST OF TECH	6,975	5,774	5,784	5,317	0	6,975	0	0
93 UNIV OF NEBRASKA-LINCOLN	6,882E	6,982	5,712	4,311	5,334E	1,080E	468E	0
94 RUSH UNIVERSITY	6,851	6,857	6,206	5,963	0	1,671	4,656	524
95 VA POLYTECH INST & ST U	6,836	7,171	7,090	6,350	5,606	1,049	181	0
96 UNIV OF HAWAII-MANOA	6,808E	6,613	7,05[illegible]	8,296	480E	3,422E	988E	1,918E
97 UNIVERSITY OF KANSAS	6,803I	6,477I	9,263[illegible]	8,647I	83I	3,595I	3,030I	95I
98 NEW YORK MEDICAL COLLEGE	6,674	4,995	5,218	4,363E	0	934	5,740	0
99 BRANDEIS UNIVERSITY	6,66[illegible]	[illegible],362	5,648	5,045	0	3,892	2,773	0
100 UNIV OF TEXAS AT AUSTIN	6,520	5,455	6,301	5,591	0	5,811	524	185
TOTAL, 1ST 100 INSTS.	2,271,413	2,200,349	2,091,061	1,852,178	182,519	839,983	1,182,189	66,722
TOTAL, ALL OTHER INSTS.	297,101	293,799	272,898	241,9[illegible]1	81,420	141,890	62,957	10,834

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ BEGINNING IN FY 1983, INCLUDES DATA FOR ROSWELL PARK MEMORIAL INSTITUTE, FORMERLY CLASSIFIED AS A NONPROFIT INSTITUTION.

3/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-55. — R&D EXPENDITURES IN THE BIOLOGICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	1,391,972	1,289,579	1,188,867	1,031,037	981,873	921,758	866,300	762,897
1 HARVARD UNIVERSITY	57,620E	52,291E	44,936E	39,566E	43,639	39,535	34,033	29,950
2 ROCKEFELLER UNIVERSITY	41,914	35,849	32,325	29,383	17,959	17,629	16,567	15,856
3 YALE UNIVERSITY	31,968	28,350	25,253	21,201	28,043	25,357	22,769E	19,714
4 UNIV OF WIS-MADISON	31,787	30,301	27,071	24,392	18,223	18,066	16,377	14,791
5 UNIVERSITY OF MICHIGAN	31,769	23,314	21,054	18,301	22,224	17,395	15,582	13,623
6 UNIV OF PENNSYLVANIA	31,011	36,158	31,091	28,620	26,481	29,006	27,016	22,736
7 CORNELL UNIVERSITY	26,954E	23,872E	18,806	17,334	13,316E	13,757	12,830	10,508
8 MASS INST OF TECHNOLOGY	26,268	23,541	22,271	19,033	21,065	20,709	18,134	15,464
9 SUNY AT BUFFALO 1/	25,012	9,844	8,824	7,777	21,352	6,667	6,558	5,576
10 JOHNS HOPKINS UNIVERSITY	23,737E	24,316	24,007	26,834	20,132E	21,205	21,090	24,212
TOTAL, 1ST 10 INSTS.	328,050	289,746	255,638	232,441	232,434	209,326	190,956	172,430
11 UNIVERSITY OF CHICAGO	23,325E	21,375E	19,916	18,442E	19,686	18,292	17,775	16,253
12 UNIVERSITY OF WASHINGTON	21,377	20,101	18,869	15,847	19,140	18,138	16,196	14,027
13 BAYLOR COL OF MEDICINE	21,357	21,344	19,765	15,110	15,204	16,403	15,588	12,651
14 UNIV OF NC AT CHAPEL HILL	21,254	15,589	15,997	13,919	19,445	14,402	14,483	12,712
15 UNIVERSITY OF CONNECTICUT	20,407	19,317	17,558	16,405	12,027	11,314	10,799	10,216
16 WASHINGTON UNIVERSITY	20,005	19,280	16,771	16,586	14,576	14,910	13,231	12,814
17 COLUMBIA UNIV MAIN DIV	19,270	16,557	13,861	12,908	17,607	15,526	13,710	11,321
18 DUKE UNIVERSITY	18,454	15,610I	14,359	13,332	16,633	15,044I	13,187	12,683
19 UNIVERSITY OF COLORADO	18,179	8,542E	8,467E	7,595	13,514	6,873E	6,802E	6,198
20 UNIVERSITY OF ROCHESTER	17,814	17,791	17,576	17,170	14,221	14,687	13,833	13,291
TOTAL, 1ST 20 INSTS.	529,492	465,251	417,777	379,755	394,407	354,915	325,558	294,296
21 UNIV OF CAL BERKELEY 2/	16,965	14,462	14,156	11,420E	13,301	11,773	11,519	10,477E
22 UNIVERSITY OF FLORIDA	16,625	15,639	12,196	4,043E	8,723	8,768	8,558	2,012E
23 PURDUE UNIVERSITY	16,174	13,235	14,147	12,036	9,189	8,770	8,358	7,492
24 MICHIGAN STATE UNIVERSITY	16,081	14,726	13,384	13,653	11,648	10,624	8,312	9,027
25 U TEX HLTH SCI CTR DALLAS	15,567	13,184	11,699	10,264	11,996	10,888	9,834	8,420
26 UNIVERSITY OF MINNESOTA	15,447	17,109	16,470	16,572	12,612	11,479	11,415	10,740
27 UNIVERSITY OF GEORGIA	14,634	13,110	11,735	9,986	9,622	9,290	8,513	7,600
28 UNIVERSITY OF UTAH	14,242	13,021	10,391	8,764	12,839	11,921	9,472	7,931
29 YESHIVA UNIVERSITY	14,124	13,710	11,913I	11,202	12,144	11,791	10,675I	8,272
30 UNIV OF CAL DAVIS 2/	13,991	6,226	5,957	4,663E	4,558	1,909	1,801	1,467E
TOTAL, 1ST 30 INSTS.	683,342	599,674	539,825	482,358	501,258	452,128	412,215	367,734
31 NEW YORK UNIVERSITY	12,463	13,347	13,127	10,536	11,706	10,532	11,112	9,406
32 IOWA ST U OF SCI & TECH	12,481	10,569	8,540	6,635	6,235	5,168	3,855	2,826
33 UNIVERSITY OF ARIZONA	12,116	12,456	10,938	9,418	7,231	7,573	6,842	5,893
34 OHIO STATE UNIVERSITY	11,872E	18,808	17,532	11,724	7,055E	9,287	8,987	7,174
35 RUTGERS THE ST UNIV OF NJ	11,442	9,826	8,668	6,966	3,892	4,117	3,891E	3,673
36 VIRGINIA COMMONWLTH UNIV	11,322I	9,669	8,693	7,398	9,827I	8,422	7,383	6,107
37 UNIV OF MISSOURI COLUMBIA	11,193	9,836	10,348	6,194	6,042	5,384	5,893	4,074
38 PENNSYLVANIA STATE UNIV	10,969	9,916	9,548	8,742	9,354	8,756	8,047	7,615
39 UNIVERSITY OF IOWA	10,919	11,145	11,249	9,844	8,264	8,095	8,572	7,600
40 TEMPLE UNIVERSITY	10,721	10,779	8,251E	7,282E	8,506	8,794	6,995	6,034
TOTAL, 1ST 40 INSTS.	799,431	716,025	646,719	567,097	579,540	528,256	483,792	428,136
41 VANDERBILT UNIVERSITY	10,718	10,199	10,049	9,202	8,818	8,844	8,781	8,217
42 NORTH DAKOTA STATE UNIV	10,706	9,401	7,186	7,185	2,375E	2,169	1,709	1,052
43 SUNY AT STONY BROOK	10,693	10,166	8,466	6,861	7,421	6,943	6,542	4,884
44 NORTHWESTERN UNIVERSITY	10,680	8,006	7,533	7,434	8,564	6,887	6,443	6,484
45 U TEX HLTH SCI CTR S ANTO	10,323	7,830	7,087	6,964	7,230	5,537	5,408	5,459
46 CASE WESTERN RESERVE UNIV	10,318	9,564	9,110	8,570	8,535	7,392	6,995	6,310
47 COLORADO STATE UNIVERSITY	10,153	10,731	11,306	8,902	7,781	7,882	8,501	6,576
48 UNIV OF ILL URBANA	10,060	8,935	8,240	7,184	8,372	7,520	7,361	6,492
49 UNIV OF TEXAS AT AUSTIN	10,051	7,973	7,787	6,911	5,811	4,654	5,453	4,907
50 UNIV OF ILL CHICAGO 3/	9,919	8,414I	7,933	6,906	6,435	6,601I	6,359	4,877
TOTAL, 1ST 50 INSTS.	903,052	807,244	731,416	643,196	650,882	592,685	547,294	483,394

SEE FOOTNOTES AT END OF TABLE.

TABLE B-55. -- R&D EXPENDITURES IN THE BIOLOGICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

-- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 U TEXAS SYSTEM CANCER CTR	9,870	9,442	9,891	7,182	2,914	3,189	3,675	2,797
52 OREGON STATE UNIVERSITY	9,864	9,617	9,265	7,837	5,101	5,413	5,389	4,311
53 UNIVERSITY OF VIRGINIA	9,812	9,099	8,522	6,335	8,667	8,112	7,749	5,845
54 LOUISIANA STATE UNIV	9,637	8,930	7,912	6,568	5,305	4,880	4,653	3,669
55 UNIVERSITY OF OKLAHOMA	9,462	6,747	6,549	3,692	3,129	3,005	2,854	2,820
56 N C STATE UNIV AT RALEIGH	9,420	9,219I	8,354	7,051	2,778	2,682I	2,328	2,113
57 UNIVERSITY OF CINCINNATI	9,395	9,156	12,090	11,639	7,122	6,789	7,805	8,039
58 UNIVERSITY OF MIAMI	9,322	7,490	6,201	6,073	5,652	4,542	5,138	4,902
59 U TEX HLTH SCI CTR HOUSTN	9,015	9,633	7,572	5,638	7,838	8,790	7,035	5,213
60 UNIV OF MED & DENT OF N J	8,926I	7,930	7,788	5,572	6,419I	4,228	5,409	4,290
TOTAL, 1ST 60 INSTS.	997,832	894,507	815,560	710,783	705,807	646,315	599,329	527,393
61 CALIFORNIA INST OF TECH	8,460	7,118	6,776	6,206	6,975	5,774	5,784	5,317
62 U MASS MED SCHL WORCESTER	7,982I	7,427	5,724	3,118	5,512I	5,247	4,047	2,029
63 INDIANA UNIVERSITY	7,903	8,508	6,936	5,877	5,936	6,118	5,705	4,775
64 MONTANA STATE UNIVERSITY	7,738	4,861	2,588	1,105	2,765	2,129	1,349	676
65 UNIV OF CAL LOS ANGELES 2/	7,267	6,284	6,009	5,142E	5,905	4,980	4,798	4,351E
66 CUNY MT SINAI SCH OF MED	7,233	7,421	6,681	6,236	6,294	5,943	5,908	5,199
67 WAYNE STATE UNIVERSITY	6,950	6,360	7,843	7,164	4,356	4,355	4,702	4,688
68 UNIV OF MD BALT PROF SCH	6,885I	6,538I	6,270E	7,422	6,794I	5,469I	6,218E	7,039
69 EMORY UNIVERSITY	6,589	5,763	4,190	3,131	6,123	5,440	3,896	2,982
70 UNIV OF VT & ST AGRIC COL	6,517	5,445	5,311	5,063	4,930	4,105	4,065	4,225
TOTAL, 1ST 70 INSTS.	1,071,346	960,232	873,888	761,247	761,397	696,875	645,801	568,674
71 OKLAHOMA STATE UNIVERSITY	6,502I	6,020I	5,268I	3,264I	1,203I	1,145I	797I	1,157I
72 UNIV OF CAL SAN DIEGO 2/	6,442	17,484	17,709	13,095E	5,699	11,843	12,108	10,187E
73 SUNY UPSTATE MEDICAL CTR	6,211	5,691	1,570I	1,570E	3,073	3,053	997I	997E
74 CARNEGIE-MELLON UNIV	6,086	6,230	6,905	6,226	3,131	3,056	2,894	2,447
75 UNIV ALABAMA BIRMINGHAM	6,082	7,489	7,954	6,326	5,037	5,818	6,818	5,892
76 U TEX MED BRNCH GALVESTON	6,077	6,211	6,781	5,623	4,595	4,900	5,548	4,615
77 MED UNIV OF SC CAROLINA	5,780	5,458	4,739	4,615	4,710	4,464	3,823	3,806
78 UNIV OF CAL IRVINE 2/	5,765	5,456	5,200	3,998E	5,122	5,079	4,825	3,718E
79 TUFTS UNIVERSITY	5,630I	5,241	5,038I	4,843	5,124I	4,875I	4,662I	4,482
80 FLORIDA STATE UNIVERSITY	5,241	4,857	4,217	3,861	2,987	2,590	2,281	2,0[illegible]
TOTAL, 1ST 80 INSTS.	1,131,132	1,030,552	938,269	814,668	802,078	743,698	690,556	608,026
81 GEORGETOWN UNIVERSITY	5,210	5,506E	5,593E	4,333	3,621	3,281	3,313	2,929
82 UNIV OF HAWAII-MANOA	5,110E	5,285	5,442	4,702	3,422E	3,627	3,884	3,103
83 SUNY DOWNSTATE MED CTR	5,060	4,667	3,779	3,856	3,491	3,174	2,566	2,185
84 UNIV OF MASS AT AMHERST	5,040	4,731	4,028	2,329	2,964	2,973	2,642	1,412
85 PRINCETON UNIVERSITY	5,009	4,724	4,645	3,609	3,279	3,572	3,769	2,431
86 U OF NEB MED CTR AT OMAHA	4,988	4,922	5,325	6,040	2,987	3,310	4,041	4,536
87 UNIV OF ALASKA FAIRBANKS	4,748	3,805	3,865	4,127	1,372	1,642	1,689	2,167
88 STANFORD UNIVERSITY	4,607	3,859	3,539	2,858	3,873	3,152	3,057	2,590
89 OREGON HLTH SCIENCES UNIV	4,467	6,232	3,264I	3,644	3,452	3,655	2,577I	2,870
90 BRANDEIS UNIVERSITY	4,403	3,565	5,932	5,284	3,892	3,086	5,648	5,045
TOTAL, 1ST 90 INSTS.	1,179,774	1,077,848	983,675	855,450	834,431	775,170	723,742	637,294
91 KANS ST U - AG & APP SCI	4,401	4,283	3,830	3,054	2,711	2,638	2,41[illegible]	1,766
92 UNIVERSITY OF KANSAS	4,331I	4,077I	5,157I	4,548I	3,595I	3,423I	4,89[illegible]	4,254I
93 ST LOUIS UNIVERSITY	3,953I	3,526	3,306I	3,674	3,348I	2,894I	2,768	3,076
94 GEORGE WASHINGTON UNIV	3,893	3,467	3,796	1,189	3,571	3,212	3,371	[illegible],174
95 THE MEDICAL COL OF PENNA	3,889E	5,867	3,966	2,651	2,995	3,470	3,317	[illegible],381
96 U TENNESSEE KNOXVILLE	3,877I	3,601	2,109I	1,584I	3,041I	2,895	1,858I	1,357I
97 ALBANY MEDICAL COLLEGE	3,836I	3,639	3,700	3,426	2,960I	2,817	1,700	1,605
98 UNIV OF CAL RIVERSIDE 2/	3,788	3,879	3,346	2,171E	1,869	1,940	1,864	1,124
99 MEDICAL COL OF GEORGIA	3,762	3,748	3,117	2,424	3,411	3,487	2,990	2,357
100 UNIVERSITY OF NEW MEXICO	3,744I	3,456	3,853	3,586	2,352I	2,239	3,056	3,077
TOTAL, 1ST 100 INSTS.	1,219,245	1,117,391	1,019,[illegible]55	883,757	864,284	804,185	7[illegible]	659,[illegible]1
TOTAL, ALL OTHER INSTS.	172,727	172,188	169,012	147,280	117,589	117,573	114,320	107,436

1/ BEGINNING IN FY 1983, INCLUDES DATA FOR ROSWELL PARK MEMORIAL INSTITUTE, FORMERLY CLASSIFIED AS A NONPROFIT INSTITUTION.

2/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

3/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-56. — R&D EXPENDITURES IN THE MEDICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

	INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
		1983	1982	1981	1980	1983	1982	1981	1980
	TOTAL, ALL INSTITUTIONS	1,798,086	1,721,694	1,599,403	1,414,350	1,[illegible]3,146	1,238,768	1,187,297	1,056,525
1	UNIV OF CAL SAN FRANCISCO 1/	89,247	95,282	89,209	70,400E	67,035	75,536	72,522	58,202E
2	STANFORD UNIVERSITY	63,364	54,190	48,828	43,753	52,065	44,933	44,412	42,738
3	UNIVERSITY OF MINNESOTA	62,145	63,561	55,877	47,208	39,548	42,768	38,792	33,867
4	UNIV OF CAL LOS ANGELES 1/	61,366	55,070	53,130	46,282E	44,697	40,486	39,068	35,201E
5	UNIVERSITY OF WASHINGTON	46,377	49,702	48,918	44,478	34,722	38,578	39,824	36,783
6	COLUMBIA UNIV MAIN DIV	46,375	50,705	48,215	45,311	41,500	45,984	40,965	36,097
7	UNIV OF WIS-MADISON	46,360	41,892	38,681	36,887	28,044	27,910	26,801	25,126
8	YALE UNIVERSITY	43,303	40,038	38,157	32,252	36,199	32,123	33,525E	26,286
9	UNIV OF PENNSYLVANIA	41,766	32,630	31,445	28,815	25,805	24,741	23,707	21,409
10	JOHNS HOPKINS UNIVERSITY	39,944E	39,031	42,186	41,092	34,878E	34,796	37,439	35,139
	TOTAL, 1ST 10 INSTS.	540,547	524,101	493,646	436,478	404,493	405,855	397,055	350,848
11	CORNELL UNIVERSITY	38,717E	35,647E	30,955	26,667	22,384E	23,072	20,656	19,134
12	UNIV OF CAL SAN DIEGO 1/	37,664	36,514	35,594	26,586E	30,790	30,403	30,338	24,942E
13	WASHINGTON UNIVERSITY	37,274	34,934	30,819	28,711	29,267	28,891	25,908	23,387
14	UNIV OF SOUTHERN CAL	46,240	43,814	39,502	34,466	23,719	24,678	22,356	20,727
15	NEW YORK UNIVERSITY	36,142	29,236	26,696	25,883	21,132	18,766	17,403	17,838
16	BAYLOR COL OF MEDICINE	32,629	27,317	24,968	22,798	21,568	19,449	18,466	18,560
17	HARVARD UNIVERSITY	27,929E	29,314E	31,432E	27,033E	21,152	22,201	23,805	20,462
18	U TEXAS SYSTEM CANCER CTR	27,631	24,463	23,010	20,462	9,151	11,440	12,212	12,148
19	YESHIVA UNIVERSITY	27,595	26,748	23,238I	21,854	23,693	23,003	20,824	16,137
20	UNIVERSITY OF IOWA	27,433	24,349	22,087	20,132	21,588	19,197	17,672	14,113
	TOTAL, 1ST 20 INSTS.	870,262	836,437	781,947	691,470	628,937	626,953	606,495	540,355
21	UNIVERSITY OF COLORADO	26,194	26,573E	26,466E	25,492	14,303	20,373	19,964E	18,994
22	UNIVERSITY OF PITTSBURGH	25,215	23,096	7,907	6,229	19,860	17,516	5,753	4,673
23	BOSTON UNIVERSITY	24,944	25,102	22,709	18,917	22,843	22,851	20,876	17,681
24	UNIVERSITY OF CHICAGO	24,311E	22,282E	21,612E	19,128E	18,757	17,428	17,729	15,386
25	UNIV ALABAMA BIRMINGHAM	24,188	27,503	25,130	23,321	19,646	23,756	21,724	18,738
26	UNIVERSITY OF MICHIGAN	23,942	25,359	24,783	22,360	16,511	22,238	22,092	21,009
27	DUKE UNIVERSITY	23,683	22,747I	21,130	15,698	20,590	21,748I	19,064	14,570
28	UNIVERSITY OF ROCHESTER	23,670	22,108	20,459	18,818	15,600	15,564	14,339	12,930
29	UNIVERSITY OF MIAMI	21,870E	23,738	23,252	18,888	14,434	16,755	17,980	14,275
30	UNIV OF CAL DAVIS 1/	21,373	21,249	20,571	15,155E	17,747	18,209	17,340	14,672E
	TOTAL, 1ST 30 INSTS.	1,109,856	1,086,194	1,007,966	885,976	809,228	823,391	783,146	693,283
31	CUNY MT SINAI SCH OF MED	21,328	23,376	22,113	20,460	14,293	15,553	17,450	15,961
32	U TEX HLTH SCI CTR DALLAS	20,389	18,874	18,169	16,303	14,565	14,233	14,056	12,432
33	UNIVERSITY OF CONNECTICUT	18,425	18,511	15,833	13,736	12,742	12,849	10,939	9,037
34	UNIV OF CAL IRVINE 1/	17,459	15,408	15,281	11,992E	13,409	11,432	11,104	9,798E
35	UNIVERSITY OF ARIZONA	16,470	15,583	13,598	10,771	10,387	10,264	9,643	7,805
36	CASE WESTERN RESERVE UNIV	16,813	17,347	17,754	17,594	13,876	13,890	13,388	12,173
37	NORTHWESTERN UNIVERSITY	16,662	16,422	15,829	16,018	9,762	9,483	9,855	9,533
38	INDIANA UNIVERSITY	16,566	14,491	11,252	10,1[illegible]	8,070	8,142	7,011	6,462
39	SUNY AT BUFFALO 2/	15,[illegible]20	9,014	8,413	[illegible]784	11,377	5,889	5,493	4,726
40	UNIV OF NC AT CHAPEL HILL	14,848	16,158	16,928	13,978	13,655	14,134	13,646	11,521
	TOTAL, 1ST 40 INSTS.	1,286,636	1,230,373	1,163,136	1,024,724	931,364	939,260	895,941	792,731
41	U TEX HLTH SCI CTR S ANTO	14,420	11,511	10,164	7,008	8,775	7,782	6,479	4,699
42	UNIV OF ILL CHICAGO 3/	13,931	8,989I	8,404	7,593	7,469	5,880I	5,652	5,160
43	UNIVERSITY OF UTAH	13,811	12,816	14,909	11,632	11,028	10,090	12,732	10,015
44	UNIVERSITY OF CINCINNATI	13,797	14,054	14,122	13,098	9,022	9,235	7,001	5,666
45	TULANE UNIVERSITY	13,167	9,159	8,600	4,536	5,085	4,237	3,661	2,917E
46	VIRGINIA COMMONWLTH UNIV	13,096I	11,170	10,482	10,279	10,902I	9,343	8,526	8,242
47	UNIVERSITY OF NEW MEXICO	12,[illegible]3I	11,836	8,174	9,052	8,123I	7,734	7,[illegible]76	7,959
48	UNIVERSITY OF FLORIDA	12,445	12,150	12,136	13,723E	5,271	5,633	5,89[illegible]	5,449E
49	EMORY UNIVERSITY	11,715	10,379	9,806	8,346	8,417	7,599	7,411	6,583
50	UNIVERSITY OF VIRGINIA	11,519	9,327	7,843	8,534	7,587	7,035	6,245	7,260
	TOTAL, 1ST 50 INSTS.	1,417,334	1,361,764	1,267,776	1,118,525	1,013,043	1,013,828	967,079	85[illegible],681

SEE FOOTNOTES AT END OF TABLE.

TABLE B-56. — R&D EXPENDITURES IN THE MEDICAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 DARTMOUTH COLLEGE	10,941	10,448	9,332	1,242	9,185	8,711	8,075	1,023
52 OREGON HLTH SCIENCES UNIV	10,937	10,581	8,142I	9,109	6,444	5,522	5,283I	5,885
53 MEDICAL COLLEGE OF WIS	10,349I	9,798I	9,092I	8,175	5,937I	5,649I	5,403I	4,863
54 OHIO STATE UNIVERSITY	10,180E	12,246	10,854	10,103	4,423E	5,648	5,862	5,306
55 UNIV OF MED & DENT OF N J	9,905I	8,193	6,801	6,822	5,037I	4,887	4,793	4,805
56 SUNY UPSTATE MEDICAL CTR	9,545	8,785	3,746I	3,746E	2,197	2,179	2,379I	2,379E
57 TEMPLE UNIVERSITY	9,063	7,742	6,898E	7,557E	5,651	5,066	5,028	5,269
58 UNIV OF MISSOURI COLUMBIA	8,642	8,403	8,748	9,694	2,982	3,383	3,308	4,847
59 U TEX HLTH SCI CTR HOUSTN	8,615	7,555	5,780	4,310	5,563	4,877	3,333	2,881
60 RUSH UNIVERSITY	8,357	7,446	7,468	5,605	4,656	4,736	4,331	3,839
TOTAL, 1ST 60 INSTS.	1,513,868	1,452,961	1,344,637	1,185,388	1,065,118	1,064,486	1,015,079	897,778
61 THOMAS JEFFERSON UNIV	8,205	7,162	7,348	7,625E	3,195	5,351	5,498	6,191E
62 ALBANY MEDICAL COLLEGE	7,987I	7,558	8,466	7,99[illegible]	4,661I	4,434	3,978	3,746
63 GEORGETOWN UNIVERSITY	7,966	7,487E	7,943E	5,204	4,013	4,627	4,962	3,570
64 LOUISIANA STATE UNIV	7,963	7,239	6,414	5,308	5,504	5,038	4,716	3,939
65 SUNY AT STONY BROOK	7,837	6,608	5,567	3,675	5,439	4,513	3,990	2,623
66 UNIV OF CAL BERKELEY 1/	7,688	6,843	8,077	6,423E	6,649	5,89[illegible]	6,832	6,286E
67 WAYNE STATE UNIVERSITY	7,660	5,916	5,765	5,289	3,664	3,199	3,500	3,330
68 UNIV OF MD BALT PROF SCH	7,481I	6,799I	6,275E	7,411	5,87[illegible]I	5,53[illegible]I	5,324E	6,028
69 VANDERBILT UNIVERSITY	7,478	8,022	7,045	3,766	5,768	5,826	5,060	2,664
70 NEW YORK MEDICAL COLLEGE	7,104	5,196	5,356	4,485E	[illegible],740	4,261	4,500	3,739E
TOTAL, 1ST 70 INSTS.	1,591,237	1,521,791	1,412,893	1,242,568	1,115,570	1,113,334	1,063,439	939,894
71 UNIF SERV UNIV OF HLTH SC	6,997	4,645	3,688	2,853	6,997	4,645	3,688	2,853
72 UNIVERSITY OF KENTUCKY	6,460	7,043	6,077	6,355	2,985	4,829	4,829	4,576
73 BROWN UNIVERSITY	6,376	5,993	4,658	4,500	4,827	4,646	3,528	3,500
74 UNIV OF VT & ST AGRIC COL	6,305	7,400	8,070	5,901	4,612	5,835	6,711	5,033
75 TUFTS UNIVERSITY	6,303I	5,951I	5,433I	5,225	4,510I	4,291I	4,105I	3,948
76 SUNY DOWNSTATE MED CTR	6,041	7,843	9,760	6,943	4,229	5,293	6,653	5,173
77 UNIV TENN CTR HEALTH SCI	6,019	5,457	6,049	6,594E	4,079	4,143	4,869	5,647
78 GEORGE WASHINGTON UNIV	6,005	5,972	4,925	8,978	5,417	5,216	4,044	7,678
79 U TEX MED BRNCH GALVESTON	5,944	5,671	5,826	5,981	4,196	4,186	4,364	4,584
80 MANNEMANN UNIVERSITY	5,912I	5,598	4,557	3,814E	4,958I	4,717	3,858	3,066
TOTAL, 1ST 80 INSTS.	1,653,599	1,583,364	1,471,936	1,[illegible],712	1,162,380	1,161,135	1,110,088	985,967
81 TEXAS A & M UNIVERSITY	5,618	4,[illegible]45	4,[illegible]	3,235	2,940	1,892	2,465	1,672
82 MICHIGAN STATE UNIVERSITY	5,545	5,324	4,[illegible]	3,367	3,039	3,022	2,307	4,[illegible]
83 UNIVERSITY OF OKLAHOMA	5,327E	3,691	4,988	2,479	1,681	1,409	1,923	1,447
84 UNIVERSITY OF MISSISSIPPI	5,241E	4,819E	4,722	3,447	2,739E	2,379E	2,715	1,411
85 PENNSYLVANIA STATE UNIV	5,127	5,256	6,072	5,117	3,362	3,957	4,380	3,681
86 UNIVERSITY OF LOUISVILLE	4,590	3,48[illegible]	2,966	3,140	2,637	2,066	1,937	2,213
87 MED UNIV OF SO CAROLINA	4,497	4,[illegible]51	4,033	4,000	2,909	2,947	3,061	2,968
88 PURDUE UNIVERSITY	4,446	3,[illegible]43	4,54[illegible]	3,958	2,333	2,276	2,532	2,239
89 UNIVERSITY OF GEORGIA	4,067	3,890	3,[illegible]79	3,287	1,253	1,298	1,229	1,181
90 UNIV OF SOUTH ALABAMA	3,987I	3,702	3,[illegible]00	537	3,006I	2,862	2,297	314
TOTAL, 1ST 90 INSTS.	1,702,044	1,625,968	1,[illegible]14,773	1,338,279	1,188,279	1,185,243	1,134,934	1,008,161
91 U OF ARKANSAS MED SCI CAM	3,854	4,171	3,859	4,652	2,643	2,603	2,805	3,473
92 MED COL OF OHIO AT TOLEDO	3,804I	3,533I	3,325E	3,325	2,659I	2,532I	2,434E	2,434
93 UNIVERSITY OF KANSAS	3,479I	3,284I	3,284I	3,742I	3,030I	2,885I	4,125I	3,583I
94 UNIV OF ILL URBANA	3,451	2,457	2,530	2,0[illegible]9	2,455	967	1,463	1,184
95 UNIV OF P R-MED SCI CMPUS	3,323I	3,150I	3,016I	2,717I	3,282I	3,125I	3,004I	2,717I
96 WRIGHT STATE UNIVERSITY	3,122	3,45[illegible]	3,474	2,9[illegible]7	1,304	1,993	2,128	2,000
97 WAKE FOREST UNIVERSITY	3,114I	2,934I	2,644E	2,5[illegible]8E	1,763I	1,678I	1,605E	1,534E
98 BRANDEIS UNIVERSITY	3,038	3,011	0	0	2,773	2,276	0	0
99 MEDICAL COL OF GEORGIA	3,008	3,337	3,232	2,[illegible]93	2,312	2,779	2,901	2,707
100 UNIV OF SOUTH CAROLINA	2,992	3,120	1,803I	1,[illegible]02E	1,380	1,586	1,[illegible]01I	1,267E
TOTAL, 1ST 100 INSTS.	1,735,229	1,658,400	1,542,940	1,3[illegible],854	1,211,880	1,207,667	1,156,800	1,029,060
TOTAL, ALL [illegible]ER INSTS.	62,857	63,294	56,469	49,502	33,266	31,101	30,497	27,465

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ BEGINNING IN FY 1983, INCLUDES DATA FOR ROSWELL PARK MEMORIAL INSTITUTE, FORMERLY CLASSIFIED AS A NONPROFIT INSTITUTION.

3/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-57. — R&D EXPENDITURES IN PSYCHOLOGY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980–83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	137,170	131,883	128,560	111,177	91,042	89,103	92,451	81,053
1 UNIVERSITY OF MICHIGAN	9,088	8,252	5,619	4,045	4,017	3,407	3,533	2,292
2 UNIV OF WIS-MADISON	6,539	6,421	6,372	6,232	5,332	5,465	5,392	5,169
3 UNIVERSITY OF KANSAS	5,148I	4,812I	5,619I	5,008I	3,766I	3,586I	5,130I	4,457I
4 MASS INST OF TECHNOLOGY	4,269	3,559	2,832	2,572	3,789	3,409	2,703	2,449
5 UNIV OF CAL BERKELEY 1/	4,253	3,898	3,511	2,708	2,238	1,900	1,929	1,906
6 ROCKEFELLER UNIVERSITY	4,108	4,338	3,832	3,760	1,962	1,675	1,485	1,898
7 UNIVERSITY OF MINNESOTA	3,788	3,377	3,842	3,907	2,861	2,425	2,837	3,304
8 RUTGERS THE ST UNIV OF NJ	3,451	2,904	2,652	2,365	1,936	1,791	1,706	1,510
9 UNIVERSITY OF CONNECTICUT	3,394	3,251	3,759	3,761	1,820	1,773	2,200	2,249
10 UNIV OF CAL LOS ANGELES 1/	3,262	3,439	3,432	2,934	2,815	3,111	3,187	2,780
TOTAL, 1ST 10 INSTS.	47,300	44,251	41,470	37,292	30,536	28,542	30,102	28,014
11 UNIV OF ILL URBANA	3,083	2,514	2,448	2,039	2,314	2,006	2,103	1,594
12 UNIV OF NC AT CHAPEL HILL	2,700	2,874	3,256	287	1,681	1,868	2,203	283
13 STANFORD UNIVERSITY	2,612	2,544	2,333	2,208	1,657	1,716	1,643	1,510
14 UNIV OF CAL SAN DIEGO 1/	2,240	1,986	1,665	715	1,259	1,645	1,289	706
15 UNIV OF SOUTHERN CAL	2,189	2,907	2,575	2,383	1,422	1,712	1,860	1,938
16 UNIVERSITY OF WASHINGTON	2,155	2,078	1,962	1,462	1,995	1,821	1,729	1,176
17 UNIVERSITY OF ROCHESTER	2,022	1,760	1,638	1,199	1,138	789	1,036	792
18 INDIANA UNIVERSITY	2,019	1,864	1,462	1,311	1,681	1,464	1,246	989
19 YALE UNIVERSITY	1,949	1,596	1,485	1,243	986	1,031	931	911
20 CORNELL UNIVERSITY	1,880E	2,283E	2,474	2,280	780	972	1,193	912
TOTAL, 1ST 20 INSTS.	70,149	66,606	62,768	52,419	45,449	43,566	45,335	38,825
21 UNIVERSITY OF COLORADO	1,851	3,091E	3,064E	3,599	1,410	2,360E	2,305E	2,597
22 UNIVERSITY OF DAYTON	1,815	1,590	51	4	1,606	1,385	2I	1
23 ST JOHN'S UNIVERSITY (NY)	1,658E	1,658	1,339	710	0	0	0	0
24 FLORIDA STATE UNIVERSITY	1,561	1,699	1,734	1,594	820	815	865	783
25 UNIV OF CAL SANTA BARBARA 1/	1,557	459	571	643	1,052	361	520	610
26 UNIVERSITY OF DENVER	1,458I	1,381	1,000I	853	1,034I	984	835I	725
27 VANDERBILT UNIVERSITY	1,408	1,048	889	600	1,024	759	657	421
28 PRINCETON UNIVERSITY	1,374	1,173	1,396	1,266	1,145	1,080	1,189	1,084
29 UNIV OF TEXAS AT AUSTIN	1,316	1,132	1,689	1,494	969	886	1,220	1,146
30 THE WRIGHT INSTITUTE	1,236I	1,171	1,663	1,461	837I	796	1,566	1,3[illegible]
TOTAL, 1ST 30 INSTS.	85,383	81,008	76,118	64,643	55,346	52,992	54,495	47,514
31 CARNEGIE-MELLON UNIV	1,192	1,360	1,370	1,0[illegible]	1,139	1,142	1,078	712
32 HARVARD UNIVERSITY	1,168E	1,410E	1,885E	1,785E	885	1,068	1,428	1,351
33 NEW YORK UNIVERSITY	1,160	1,202	1,032	897	1,092	954	776	556
34 UNIV OF PENNSYLVANIA	1,127	1,131	1,153	1,142	993	995	1,027	1,058
35 UNIV OF MASS AT AMHERST	1,116	1,286	1,142	757	893	1,025	91[illegible]	575
36 PURDUE UNIVERSITY	1,038	826	975	564	612	561	618	292
37 SUNY AT STONY BROOK	1,025	761	816	734	711	520	631	421
38 MICHIGAN STATE UNIVERSITY	1,014	952	555	1,891	672	596	10	806
39 UNIVERSITY OF FLORIDA	1,006	899	836	938E	605	526	622	52[illegible]
40 TEXAS A & M UNIVERSITY	1,001	18	2	11	865	0	0	0
TOTAL, 1ST 40 INSTS.	96,230	90,853	85,874	74,455	63,813	60,379	61,597	53,976
41 UNIVERSITY OF CHICAGO	992E	909E	960E	858E	614E	572	689	648
42 UNIV OF SOUTH CAROLINA	905	881	[illegible]71	265E	409	447	141I	127E
43 JOHNS HOPKINS UNIVERSITY	903E	1,083	1,109	1,131	682E	744	728	886
44 SUNY AT ALBANY	876	850	798	459E	741	713	708	382
45 UNIVERSITY OF ARIZONA	863	769	215	157	749	642	151	61
46 UNIVERSITY OF IOWA	840	934	867	768	534	584	572	504
47 NORTHWESTERN UNIVERSITY	835	774	796	948	662	744	743	896
48 UNIVERSITY OF OREGON MAIN	831	643	817	940	776	564	745	908
49 UNIV OF MASS BOSTON	823I	592I	538I	223I	496I	281I	282I	143I
50 GEORGIA INSTITUTE OF TECH	800	597	233	134	478	323	129	78
TOTAL, 1ST 50 INSTS.	104,898	98,885	92,524	80,338	69,954	65,993	66,485	58,601

SEE FOOTNOTES AT END OF TABLE.

TABLE B-57. -- R&D EXPENDITURES IN PSYCHOLOGY AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

-- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
51 UNIVERSITY OF GEORGIA	754	755	910	842	75	187	316	242
52 NORTHEASTERN UNIVERSITY	683I	647	575E	536I	585I	556	480E	518I
53 CUNY GRAD SCH & UNIV CTR	678	587	482	488	638	557	449	452
54 UNIVERSITY OF OKLAHOMA	[illegible]	1,163	1,708	569	257	783	791	409E
55 ARIZONA STATE UNIVERSITY	640	380	309	262	322	328	301	237
56 SUNY AT BINGHAMTON	629	410	535	485	254	260	351	342
57 BRANDEIS UNIVERSITY	596	590	433	283	466	424	417	267
58 UNIV OF MISSOURI COLUMBIA	592	589	554	478	227	200	196	135
59 WASHINGTON UNIVERSITY	568	675	730	738	485	537	654	672
60 BROWN UNIVERSITY	563	558	671	500	562	558	671	500
TOTAL, 1ST 60 INSTS.	111,260	105,239	99,431	85,519	73,025	70,383	71,111	62,375
61 COLUMBIA UNIV MAIN DIV	562	518	607	491	506	461E	470	435
62 UNIVERSITY OF LOUISVILLE	541	524	323	168	496	516	309	153
63 UNIV OF MD COLLEGE PARK	535E	517	573	824	499	482	484	644
64 SAN DIEGO STATE UNIV	525	336	419	251	389	250	379	236
65 SYRACUSE UNIVERSITY	483	466	412	325	228	292	279	153
66 SETON HALL UNIVERSITY	476I	453I	434I	390I	476I	453I	434I	390I
67 TENNESSEE STATE UNIV	473I	448I	407E	391	183I	184I	167E	0
68 CUNY BROOKLYN COLLEGE	470I	434I	427I	380I	303I	304I	305I	276I
69 OHIO STATE UNIVERSITY	432E	549	574	733	320E	405	476	493
70 UNIV OF MAINE ORONO	428	226	2	65	128	226	0	37
TOTAL, 1ST 70 INSTS.	116,185	109,728	103,609	89,185	77,353	73,956	74,414	65,272
71 CALIF ST COL STANISLAUS	417	394	319	323	0	0	0	0
72 UNIVERSITY OF PITTSBURGH	409	395	381	427	314	276	293	368
73 UNIV OF NEBRASKA-LINCOLN	396E	396	96	308	53E	53	65	130
74 CUNY HUNTER COLLEGE	390E	289	329	0	368	186	213	0
75 N C STATE UNIV AT RALEIGH	381	771	68	30	97	351	30	30
76 EMORY UNIVERSITY	379	365	175	65	358	339	150	62
77 U OF HOUSTON UNIV PARK	376	1,078	1,166	1,090	168	486	593	607
78 UNIVERSITY OF VIRGINIA	376	363	398	499	259	273	372	469
79 UNIVERSITY OF MONTANA	372	270	150	40	173	151	80	37
80 PENNSYLVANIA STATE UNIV	368	301	275	236	261	218	147	119
TOTAL, 1ST 80 INSTS.	120,049	113,656	106,966	92,203	79,404	75,973	76,357	67,094
81 WESLEYAN UNIVERSITY	358I	358I	339I	126E	334I	319I	319I	115E
82 UNIV OF CAL RIVERSIDE 1/	355	228	278	213	332	203	261	204
83 UNIV OF ILL CHICAGO 2/	351	959	262	199	303	198	210	143
84 BOWLING GREEN STATE UNIV	350	272	538I	538I	190	239	417I	417I
85 BOSTON UNIVERSITY	345	435	303	166	154	287	292	154
86 RUSH UNIVERSITY	342	303	109	243	286	251	62	232
87 BARNARD COLLEGE	338I	158I	158I	156E	272I	133I	133I	139E
88 NEW MEXICO STATE UNIV	333	340	218	178	318	332	176	152
89 GALLAUDET COLLEGE	332	0	0	0	332	0	0	0
90 DUKE UNIVERSITY	324	518I	454	602	312	518I	454E	588
TOTAL, 1ST 90 INSTS.	123,477	117,477	109,625	94,624	82,237	79,068	78,681	69,238
91 SUNY AT BUFFALO	316	400	368	221	234	318	292	176
92 IOWA ST U OF SCI & TECH	306	333	322	343	25	105	104	140
93 VA POLYTECH INST & ST U	281	224	153	198	169	172	116	112
94 CLARK UNIVERSITY	276I	260	269	218	197I	187	189	146
95 SOUTHERN ILL U-CARBONDALE	249	205	237	164	107	107	125	90
96 LOMA LINDA UNIVERSITY	267I	252E	242I	417E	199I	189E	184I	316E
97 WAYNE STATE UNIVERSITY	267	231	329	246	151	173	176	74
98 HAHNEMANN UNIVERSITY	265I	251	477	365	256I	243	413	269
99 TUFTS UNIVERSITY	251I	239I	226I	217	229I	218I	209I	201
100 KENT STATE UNIVERSITY	250	351	525I	201I	203	253	336I	175I
TOTAL, 1ST 100 INSTS.	126,225	119,953	112,773	97,214	84,001	81,033	80,825	70,937
TOTAL, ALL OTHER INSTS.	10,945	11,930	15,787	13,963	7,041	8,070	11,626	10,116

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-58. — R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCI-OLOGY	OTHER
	1983	1982	1981	1980				
TOTAL, ALL INSTITUTIONS	345,512	353,809	372,289	341,551	94,698	55,272	76,869	118,673
1 UNIVERSITY OF MICHIGAN	22,058	19,291	27,914	21,048	7,917	7,419	4,822	1,900
2 UNIV OF PENNSYLVANIA	13,136	16,011	14,426	13,868	4,610	1,033	2,387	5,106
3 UNIV OF CAL BERKELEY 1/	11,048	8,858	7,631	10,292	58	6,747	1,987	2,256
4 UNIV OF TEXAS AT AUSTIN	10,979	6,196	9,743	5,338	1,448	2,045	1,161	6,325
5 UNIV OF WIS-MADISON	10,309	11,981	13,998	13,106	4,095	330	4,927	957
6 UNIVERSITY OF GEORGIA	9,077	8,517	7,650	6,656	4,273	504	717	3,583
7 UNIV OF ILL URBANA	8,692	9,742	9,761	8,761	3,909	310	282	4,131
8 CORNELL UNIVERSITY	6,879E	6,912E	6,522	6,393	2,775E	286E	1,044E	2,774E
9 UNIV OF CAL LOS ANGELES 1/	6,485	6,477	7,015	8,604	162	25	227	6,021
10 MASS INST OF TECHNOLOGY	6,034	5,310	3,934	4,008	1,085	2,118	0	2,831
TOTAL, 1ST 10 INSTS.	104,587	99,295	104,594	98,074	30,332	20,817	17,554	35,884
11 COLUMBIA UNIV MAIN DIV	5,481	5,822	6,076	6,090	1,602	354	1,790	1,735
12 UNIVERSITY OF ARIZONA	5,402	4,890	4,957	3,985	2,433	250	80	2,639
13 UNIVERSITY OF DENVER	5,360I	5,076	5,017I	4,278	2,608I	104I	2,581I	67I
14 RUTGERS THE ST UNIV OF NJ	4,854	5,626	6,706	6,326	1,299	1,464	210	1,781
15 PRINCETON UNIVERSITY	4,676	5,028	4,851	3,318	846	3,599	231	0
16 HARVARD UNIVERSITY	4,554E	5,442E	6,607E	7,365E	915E	1,727E	829E	1,083E
17 ST JOHN'S UNIVERSITY (NY)	4,387E	4,367	3,876	3,168	1,643E	1,373E	1,371E	0
18 BRANDEIS UNIVERSITY	4,327	3,560	3,030	2,161	59	81	5	4,182
19 JOHNS HOPKINS UNIVERSITY	4,214E	4,285	4,120	2,690	457	24	3,422E	311
20 PURDUE UNIVERSITY	4,006	3,772	4,134	4,307	3,373	45	187	401
TOTAL, 1ST 20 INSTS.	151,848	147,183	153,968	141,762	45,667	29,838	28,260	48,083
21 UNIVERSITY OF NEW MEXICO	3,864I	3,562	1,472	1,386	142I	4I	3I	3,715I
22 YALE UNIVERSITY	3,513	4,434	4,430	3,769	1,375	76	98	1,964
23 UNIV OF NC AT CHAPEL HILL	3,469	5,701	5,463	3,411	141	7	1,572	1,749
24 UNIV OF MISSOURI COLUMBIA	3,459	3,153	3,089	3,124	2,435	24	838	162
25 UNIVERSITY OF OKLAHOMA	3,453	2,937	3,015	2,548	800	959	1,103	591
26 US NAVAL POSTGRAD SCHOOL	3,252	1,535	835	939	616	235	2,401	0
27 UNIVERSITY OF COLORADO	3,219	3,055	3,421	2,270	542	75	288	2,314
28 TEMPLE UNIVERSITY	3,185	962	985E	1,765E	1	60	3,113	11
29 SYRACUSE UNIVERSITY	3,157	4,536	3,780	5,267	1,611	262	217	1,067
30 OKLAHOMA STATE UNIVERSITY	3,149I	2,902I	2,628I	1,339I	800I	0	108I	2,241I
TOTAL, 1ST 30 INSTS.	185,568	179,960	183,086	167,580	54,130	31,540	38,001	61,897
31 UNIV OF WEST FLORIDA	3,133	3,624	3,397	2,632	16	121	1,087	1,909
32 UNIVERSITY OF MINNESOTA	3,098	4,592	4,503	4,420	1,905	414	449	330
33 UNIV OF SOUTHERN CAL	3,091	3,045	4,190	5,139	467	1,449	1,061	114
34 COLORADO STATE UNIVERSITY	3,0[illegible]	3,394	3,372	2,426	93	72	267	2,674
35 MICHIGAN STATE UNIVERSITY	3,042	2,822	4,597	6,531	1,855	122	1,004	61
36 IOWA ST U OF SCI & TECH	3,003	2,418	4,393	3,108	1,904	55	1,044	0
37 PENNSYLVANIA STATE UNIV	2,811	2,667	3,233	2,417	1,501	258	0	1,052
38 UNIV OF CAL SANTA BARBARA 1/	2,733	1,789	1,499	2,342	807	41	983	902
39 LOUISIANA STATE UNIV	2,638	2,581	2,480	1,804	1,622	243	362	411
40 UNIVERSITY OF WASHINGTON	2,610	2,615	1,952	1,735	267	869	1,375	99
TOTAL, 1ST 40 INSTS.	214,793	209,527	216,502	200,134	64,527	35,184	45,633	69,449
41 ARIZONA STATE UNIVERSITY	2,599	1,716	866	1,015	614	264	56	1,665
42 CARNEGIE-MELLON UNIV	2,595	2,550	2,648	2,631	973	1,074E	548	0
43 GEORGIA INSTITUTE OF TECH	2,450	2,569	4,360	4,006	2,287	77	77	9
44 TENNESSEE STATE UNIV	2,449I	2,295I	2,084E	233I	304I	455I	445I	1,245I
45 SUNY AT ALBANY	2,433	1,389	1,380	470E	16	1,835	433	149
46 UNIV OF ALASKA FAIRBANKS	2,387	2,621	2,638	1,928	683	446	1,166	72
47 STANFORD UNIVERSITY	2,328	3,368	3,609	4,038	218	61	180	1,869
48 OHIO STATE UNIVERSITY	2,181E	2,921	3,788	3,156	346E	1,199E	358E	318E
49 UNIVERSITY OF CHICAGO	2,139E	1,960E	2,374E	2,245E	421E	437E	0	1,281E
50 UNIV OF ILL CHICAGO 2/	2,062	2,721	1,757	2,317	38	243	355	1,426
TOTAL, 1ST 50 INSTS.	238,416	233,637	242,026	222,173	70,427	41,255	49,251	77,483

SEE FOOTNOTES AT END OF TABLE.

TABLE B-58. — R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCI-OLOGY	OTHER
	1983	1982	1981	1980				
51 FLORIDA STATE UNIVERSITY	1,833	1,914	2,716	3,183	144	505	1,062	122
52 NEW YORK UNIVERSITY	1,817	2,545	3,055	2,940	794	182	66	775
53 UNIV OF NEBRASKA-LINCOLN	1,794E	1,794	2,283	2,062	1,357E	37E	175E	225E
54 OREGON STATE UNIVERSITY	1,664	1,352	2,227	1,982	1,134	0	281	249
55 UNIVERSITY OF N DAKOTA	1,635I	1,785	369I	302I	53I	52I	433I	1,097I
56 U TENNESSEE KNOXVILLE	1,633I	1,517	2,785I	2,278I	29I	146I	64I	1,394I
57 INDIANA UNIVERSITY	1,594	2,000	1,529	1,427	304	430	280	580
58 UNIV OF MAINE ORONO	1,566	1,803	1,749	1,402	696	60	214	596
59 SUNY AT BINGHANTON	1,540	1,856	1,738	1,597	161	344	213	822
60 UNIVERSITY OF CONNECTICUT	1,530	1,727	1,823	1,353	168	92	872	398
TOTAL, 1ST 60 INSTS.	255,022	251,930	262,300	240,699	75,267	43,[illegible]	52,911	83,741
61 UNIV OF HAWAII-MANOA	1,525E	1,472	1,692	1,348	525	2	211	787E
62 MISSISSIPPI STATE UNIV	1,508	2,699	2,722	2,018	1,110	1	254	143
63 GEORGE WASHINGTON UNIV	1,488	2,108	[illegible]	1,614	226	53	835	374
64 EASTERN WASHINGTON UNIV	1,461I	1,409	779	22	18I	13I	0	1,430I
65 UNIVERSITY OF KANSAS	1,431I	1,285I	746I	757I	332I	45I	20I	1,031I
66 WAYNE STATE UNIVERSITY	1,421	518	1,262	1,210	136	25	1,260	0
67 WELLESLEY COLLEGE	1,414	1,667	1,962	1,304	0	0	1,287	127
68 SOUTHERN ILL U-CARBONDALE	1,357	1,437	1,281	1,242	3	16	15	1,323
69 UNIV OF WIS-MILWAUKEE	1,330	1,429	1,806	1,626	62	39	136	1,093
70 UNIVERSITY OF IOWA	1,320	2,253	2,129	1,043	120	224	457	519
TOTAL, 1ST 70 INSTS.	269,277	268,204	277,464	252,903	77,799	53,524	57,386	90,568
71 WEST VIRGINIA UNIVERSITY	1,318	2,383	2,366	2,475	32	286	14	986
72 VANDERBILT UNIVERSITY	1,317	873	987	643	17	1,196	86	18
73 UNIVERSITY OF VIRGINIA	1,317	1,329	1,498	1,172	576	417	307	17
74 UNIV OF MD COLLEGE PARK	1,300E	1,689	1,742	1,406	185	364	292	459
75 UNIV OF CAL SAN DIEGO 1/	1,288	892	811	505	148	783	276	84
76 UNIV OF MASS BOSTON	1,255I	894I	815I	340I	0	0	1,184I	71I
77 NORTHERN ILLINOIS UNIV	1,239E	1,172	1,595	1,022	0	780E	66E	393E
78 TEXAS A & M UNIVERSITY	1,223	1,245	1,013	1,948	596	5	55	567
79 UNIV OF ARK FAYETTEVILLE	1,213	1,864	4,921E	3,964E	129	0	48	1,036
80 NORTH TEXAS STATE UNIV	1,207	1,288	1,132	1,059E	534	106	11	556
TOTAL, 1ST 80 INSTS.	281,954	281,833	294,344	267,437	80,013	47,461	59,725	94,755
81 NORTHEASTERN UNIVERSITY	1,188I	1,125	594E	547I	288I	0	404I	496I
82 SOUTH DAKOTA STATE UNIV	1,185I	1,392I	1,187	532	381I	804I	0	0
83 VA POLYTECH INST & ST U	1,183	1,267	1,350	1,203	947	197	39	0
84 UNIVERSITY OF FLORIDA	1,163	1,002	1,450	1,930E	512	493	74	84
85 UNIV OF MASS AT AMHERST	1,161	1,350	1,212	928	503	38	550	70
86 UTAH STATE UNIVERSITY	1,081	1,820	1,615	1,538	782	18	281	0
87 ILLINOIS STATE UNIVERSITY	1,051I	969	1,049	463	18I	1I	9I	1,023I
88 SOUTHERN METHODIST UNIV	1,035	679	472I	591	0	8	91	936
89 GALLAUDET COLLEGE	1,018	1,054	970	919I	0	0	829	189
90 TEXAS TECH UNIVERSITY	1,002	434	373	333	7	0	0	995
TOTAL, 1ST 90 INSTS.	293,021	292,925	304,616	276,421	83,451	49,020	62,002	98,548
91 UNIV OF P R-RIO PIEDRAS	985I	897I	830I	721I	0	17[illegible]	631I	337I
92 UNIVERSITY OF IDAHO	974	1,180	1,112	1,243	752	27	0	195
93 DUKE UNIVERSITY	923	1,378I	1,323	1,381	26	72	607	208
94 CLEVELAND STATE UNIV	894	816	1,177	715	3	242	0	649
95 CLAREMONT GRADUATE SCHOOL	882I	835	40	0	28I	0	107I	747I
96 TEXAS CHRISTIAN UNIV	870	11[illegible]	2,679E	1,481	5	3	469	393
97 MONTANA STATE UNIVERSITY	851	[illegible]	881	1,076	583	0	268	0
98 UNIVERSITY OF WYOMING	851	97[illegible]	725	909	784	1	15	51
99 UNIV OF NEVADA - RENO	848I	670E	132	305	33I	86I	0	729I
100 UNIV OF SOUTH CAROLINA	839	802	635I	544E	0	498	341	0
TOTAL, 1ST 100 INSTS.	301,938	301,249	314,150	284,796	85,675	49,966	64,440	101,857
TOTAL, ALL OTHER INSTS.	43,574	52,560	58,139	56,795	9,023	5,306	12,429	16,816

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-39. — FEDERALLY FINANCED R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCI-OLOGY	OTHER
	1983	1982	1981	1980				
TOTAL, ALL INSTITUTIONS	148,819	162,506	187,623	181,627	37,651	20,034	42,852	48,282
1 UNIVERSITY OF MICHIGAN	9,503	8,596	14,399	13,733	3,837	2,816	2,249	601
2 UNIV OF WIS-MADISON	5,944	8,812	10,255	9,561	2,210	71	3,272	391
3 UNIV OF PENNSYLVANIA	5,803	8,387	7,688	7,698	1,621	637	1,429	2,116
4 UNIV OF CAL BERKELEY 1/	4,514	3,758	2,964	4,626	0	3,169	845	500
5 MASS INST OF TECHNOLOGY	3,903	3,277	2,728	2,902	549	1,515	0	1,839
6 UNIVERSITY OF DENVER	3,883I	3,694	4,141I	3,598	1,886I	33I	1,942I	22I
7 JOHNS HOPKINS UNIVERSITY	3,700E	3,598	3,225	2,006	34	19	3,344E	303
8 HARVARD UNIVERSITY	3,449	4,122	5,004	5,575	693	1,308	628	820
9 BRANDEIS UNIVERSITY	3,308	2,620	2,191	1,775	58	16	5	3,229
10 US NAVAL POSTGRAD SCHOOL	3,252	1,535	805	939	616	235	2,401	0
TOTAL, 1ST 10 INSTS.	47,259	48,399	53,500	52,413	11,504	9,819	16,115	9,821
11 TEMPLE UNIVERSITY	3,047	500	439	633	0	60	2,976	11
12 UNIVERSITY OF COLORADO	2,753	2,499	2,804	1,870	280	31	259	2,183
13 COLUMBIA UNIV MAIN DIV	2,454	2,575	3,247	3,724	283	89	1,023	1,059
14 UNIVERSITY OF NEW MEXICO	2,327I	2,216	282	413	53I	0I	0I	2,274I
15 CORNELL UNIVERSITY	2,323	2,834	3,345	3,380	786	30	385	1,122
16 MICHIGAN STATE UNIVERSITY	2,311	2,126	3,167	4,153	1,664	116	485	46
17 YALE UNIVERSITY	2,173	2,203	2,553E	2,362	1,129	70	58	916
18 UNIV OF ILL URBANA	2,124	3,385	3,619	3,658	1,199	109	62	754
19 CARNEGIE-MELLON UNIV	2,081	1,971	1,896	1,974	738	914	429	0
20 UNIV OF TEXAS AT AUSTIN	2,048	2,041	2,076	2,142	109	269	698	972
TOTAL, 1ST 20 INSTS.	70,900	70,749	76,928	76,722	17,745	11,507	22,490	19,158
21 SYRACUSE UNIVERSITY	2,007	1,237	2,080	1,281	1,426	17	0	564
22 RUTGERS THE ST UNIV OF NJ	1,802	3,371	4,633	3,769	187	70	181	1,364
23 UNIV OF CAL SANTA BARBARA 1/	1,788	1,138	931	1,740	462	2	631	693
24 UNIV OF NC AT CHAPEL HILL	1,709	2,596	2,996	1,730	105	7	1,092	505
25 STANFORD UNIVERSITY	1,647	2,823	3,295	3,770	203	56	128	1,260
26 PURDUE UNIVERSITY	1,539	1,741	1,921	2,087	1,075	39	73	352
27 PENNSYLVANIA STATE UNIV	1,507	1,346	1,441	1,263	886	79	0	542
28 PRINCETON UNIVERSITY	1,499	2,040	2,711	1,771	287	1,044	148	0
29 UNIVERSITY OF ARIZONA	1,495	1,609	2,152	1,351	703	49	15	728
30 GEORGIA INSTITUTE OF TECH	1,463	1,390	2,418	2,321	1,366	46	46	5
TOTAL, 1ST 30 INSTS.	87,356	90,040	101,506	97,805	24,445	12,936	24,804	25,171
31 UNIVERSITY OF GEORGIA	1,415	1,357	1,467	1,234	878	0	183	354
32 COLORADO STATE UNIVERSITY	1,347	2,087	2,001	1,561	46	28	4	1,269
33 UNIVERSITY OF WASHINGTON	1,346	1,454	1,130	1,014	103	305	901	37
34 UNIVERSITY OF MINNESOTA	1,287	1,973	2,289	2,225	875	78	261	73
35 UNIV OF CAL LOS ANGELES 1/	1,285	1,375	1,449	4,400	101	16	212	956
36 U TENNESSEE KNOXVILLE	1,281I	1,220	1,404I	1,026I	24I	115I	50I	1,092I
37 UNIV OF SOUTHERN CAL	1,218	1,093	2,032	3,166	89	458	667	4
38 UNIVERSITY OF CHICAGO	1,184	1,103	1,589	1,532	273	322	0	589
39 IONA ST U OF SCI & TECH	1,111	837	2,898	1,714	691	0	420	0
40 OHIO STATE UNIVERSITY	1,012E	1,411	1,939	1,718	94E	383E	288E	247E
TOTAL, 1ST 40 INSTS.	99,842	103,870	119,704	117,375	27,619	14,641	27,790	29,792
41 UNIV OF MD COLLEGE PARK	986	1,280	1,022	778	136	322	172	356
42 SUNY AT ALBANY	972	584	745	349	1	710	239	18
43 ARIZONA STATE UNIVERSITY	948	699	734	817	36	69	11	832
44 GALLAUDET COLLEGE	898	1,027	854	0	0	0	709	189
45 UNIV OF MISSOURI COLUMBIA	884	1,163	966	1,196	663	15	119	87
46 NORTHEASTERN UNIVERSITY	859I	818	386E	417I	201I	0	338I	320I
47 OREGON STATE UNIVERSITY	846	459	578	991	546	0	84	216
48 INDIANA UNIVERSITY	831	810	925	702	73	304	210	244
49 UNIV OF ILL CHICAGO 2/	803	1,174	794	1,106	6	196	221	380
50 DUKE UNIVERSITY	795	1,280I	1,122E	1,201	35	43	560	157
TOTAL, 1ST 50 INSTS.	108,660	113,164	127,830	124,932	29,316	16,300	30,453	32,591

SEE FOOTNOTES AT END OF TABLE.

TABLE B-59. -- FEDERALLY FINANCED R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1980-83

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TRENDS				1983 SCIENCE FIELDS			
	SOCIAL SCIENCES TOTAL				ECO-NOMICS	POLITICAL SCIENCE	SOCI-OLOGY	OTHER
	1983	1982	1981	1980				
51 NEW YORK UNIVERSITY	785	1,032	1,592	1,778	285	41	60	399
52 WEST VIRGINIA UNIVERSITY	778	785	1,281	815	9	34	9	726
53 UNIV OF MASS BOSTON	776I	440I	442I	224I	0	0	776I	0I
54 GEORGE WASHINGTON UNIV	766	1,157	528	1,393	3	9	640	114
55 UNIVERSITY OF IDAHO	746	849	727	438	680	0	0	66
56 NORTH TEXAS STATE UNIV	745	978	820	454E	380	40	0	325
57 TENNESSEE STATE UNIV	709I	711I	645E	0	271	40I	162I	480I
58 FORDHAM UNIVERSITY	705	793	449	332	14	20	671	0
59 WELLESLEY COLLEGE	699	813	1,005	537	0	0	648	51
60 BROWN UNIVERSITY	699	961	800	905	0	18	161	520
TOTAL, 1ST 60 INSTS.	116,068	121,683	136,119	131,408	30,714	16,502	33,580	35,272
61 WASHINGTON STATE UNIV	697	364	1,197	456	29	3	0	665
62 UNIV OF WIS-MILWAUKEE	681	795	1,045	1,101	40	4	18	619
63 UNIV OF CAL SAN DIEGO 1/	666	415	566	437	135	213	247	71
64 U TEX HLTH SCI CTR HOUSTN	658	619	422	225	0	0	658	0
65 EASTERN WASHINGTON UNIV	652I	654	360	3	0I	0I	0	652I
66 UNIVERSITY OF CONNECTICUT	625	677	824	755	71	37	355	162
67 INST OF AGRI UNIV OF TENN	594	594	556	0	594	0	0	0
68 VA POLYTECH INST & ST U	568	579	630	609	372	186	10	0
69 UNIVERSITY OF N DAKOTA	562I	560	26I	24I	14I	0I	409I	139I
70 BOSTON UNIVERSITY	561	496	540	615	63	0	498	0
TOTAL, 1ST 70 INSTS.	122,332	127,436	142,385	135,633	32,032	16,945	35,775	37,580
71 UNIVERSITY OF OKLAHOMA	559	993	871	1,223	112	133	112	202
72 LOYOLA UNIV - CHICAGO	556	555	161	135I	0	0	0	556
73 TEXAS TECH UNIVERSITY	545	167	153	287	0	0	0	545
74 UTAH STATE UNIVERSITY	529	782	636	663	349	14	166	0
75 TEXAS A & M UNIVERSITY	525	522	551	795	452	0	17	56
76 SUNY AT BINGHAMTON	524	1,234	1,288	1,120	62	44	191	227
77 UNIV OF MASS AT AMHERST	517	425	338	582	84	17	361	55
78 UNIVERSITY OF WYOMING	513	651	458	640	502	0	1	10
79 NORTHERN ILLINOIS UNIV	484	206	142	140	2	74	17	393
80 VANDERBILT UNIVERSITY	483	561	718	364	0	424	59	0
TOTAL, 1ST 80 INSTS.	127,567	133,532	147,707	141,582	33,593	17,651	36,699	39,624
81 UNIV OF NEBRASKA-LINCOLN	479E	544	741	983	226E	0	82E	171E
82 UNIV OF ALASKA FAIRBANKS	468	577	296	660	138	0	271	59
83 UNIV OF WEST FLORIDA	447	666	1,117	846	0	6	408	33
84 PORTLAND STATE UNIVERSITY	426I	405	1,074I	975I	0	0	367I	59I
85 CUNY HUNTER COLLEGE	405	43	256	0	0	0	98	307
86 WAYNE STATE UNIVERSITY	353	174	300	341	69	0	284	0
87 UNIVERSITY OF UTAH	344	389	160	195	191	0	40	113
88 SUNY AT STONY BROOK	343	438	412	543	75	101	72	95
89 VIRGINIA COMMONWEALTH UNIV	332I	284	290	8	0	4I	328I	0
90 KANS ST U - AG & APP SCI	331	449	307	278	189	1	11	130
TOTAL, 1ST 90 INSTS.	131,495	137,501	152,660	146,411	34,481	17,763	38,660	40,591
91 CLAREMONT GRADUATE SCHOOL	313I	298	40	0	0I	0	0I	313I
92 SOUTHERN METHODIST UNIV	306	379	373I	467	0	0	90	216
93 UNIVERSITY OF PITTSBURGH	291	197	173	250	0	0	0	291
94 TULANE UNIVERSITY	287	601	391	110E	31	0	94	162
95 CLEMSON UNIVERSITY	283	770	527	370	11	0	6	266
96 SOUTH CAROLINA ST COLLEGE	282I	240	0I	0	79I	85I	118I	0
97 CASE WESTERN RESERVE UNIV	274	448	281	123	1	0	14	259
98 N C STATE UNIV AT RALEIGH	270	152I	132	231	125	30	41	74
99 ILLINOIS STATE UNIVERSITY	268I	255	317	104	15I	0I	0I	253I
100 GEORGETOWN UNIVERSITY	262	233	29	0	0	0	0	262
TOTAL, 1ST 100 INSTS.	134,331	141,074	154,923	148,066	34,743	17,878	39,023	42,687
TOTAL, ALL OTHER INSTS.	14,488	21,432	32,700	33,561	2,408	2,156	3,829	5,595

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-60. — CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD AND SOURCE OF FUNDS: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

FIELD	TOTAL			FEDERALLY FINANCED			NON-FEDERAL		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	408,498	435,402	6.6	266,738	273,076	2.4	141,760	162,326	14.5
ENGINEERING	69,861	79,171	14.1	43,220	48,837	13.0	22,641	26,334	16.3
AERONAUTICAL AND ASTRONAUTICAL	2,274	2,837	24.2	1,376	2,100	52.6	908	737	-18.8
CHEMICAL	6,443	6,172	-4.2	3,821	3,559	-6.9	2,621	2,613	-.3
CIVIL	5,164	6,086	17.9	2,823	3,422	21.2	2,341	2,664	13.8
ELECTRICAL	18,454	20,685	12.1	14,058	14,516	3.3	4,396	6,169	40.3
MECHANICAL	7,390	10,008	35.4	4,208	6,563	56.0	3,182	3,445	8.3
OTHER, N.E.C.	26,127	29,383	12.5	16,934	18,677	10.3	9,193	10,706	16.5
PHYSICAL SCIENCES	78,126	79,153	1.3	62,642	62,137	-.8	15,484	17,016	9.9
ASTRONOMY	5,127	4,243	-17.2	3,941	3,465	-12.1	1,186	778	-34.4
CHEMISTRY	33,323	32,826	-1.5	24,927	23,632	-5.2	8,396	9,194	9.5
PHYSICS	33,189	35,673	7.5	28,527	29,588	3.7	4,662	6,085	30.5
OTHER, N.E.C.	6,487	6,411	-1.2	5,247	5,452	3.9	1,240	959	-22.7
ENVIRONMENTAL SCIENCES	28,321	31,123	9.9	16,423	19,643	6.6	9,898	11,480	16.0
ATMOSPHERIC	4,536	5,025	10.8	3,287	3,617	10.0	1,249	1,408	12.7
EARTH SCIENCES	10,538	11,584	9.9	6,314	6,609	4.7	4,222	4,975	17.8
OCEANOGRAPHY	8,879	10,928	23.1	6,000	6,837	13.9	2,879	4,091	42.1
OTHER, N.E.C.	4,370	3,586	-17.9	2,822	2,580	-8.6	1,548	1,006	-35.0
MATHEMATICAL/COMPUTER SCIENCES	15,228	18,177	19.4	9,832	11,705	19.1	5,396	6,472	19.9
MATHEMATICS	2,556	2,668	4.4	1,617	1,476	-8.7	939	1,192	26.9
COMPUTER SCIENCES	12,672	15,509	22.4	8,215	10,229	24.5	4,457	5,280	18.5
LIFE SCIENCES	199,574	206,587	3.5	120,189	117,342	-2.4	79,385	89,245	12.4
AGRICULTURAL SCIENCES	38,921	38,813	-.3	11,706	10,746	-8.2	27,215	28,067	3.1
BIOLOGICAL SCIENCES	75,889	75,155	-1.0	53,183	51,041	-4.0	22,706	24,114	6.2
MEDICAL SCIENCES	78,809	85,942	9.1	51,547	51,546	.0	27,262	34,396	26.2
OTHER, N.E.C.	5,955	6,677	12.1	3,753	4,009	6.8	2,202	2,668	21.2
PSYCHOLOGY	5,784	6,526	12.8	4,219	4,753	12.7	1,565	1,773	13.3
SOCIAL SCIENCES	7,143	8,938	25.1	2,907	2,912	.2	4,236	6,026	42.3
ECONOMICS	1,704	1,911	12.1	674	728	8.0	1,030	1,183	14.9
POLITICAL SCIENCE	765	767	.3	312	319	2.2	453	448	-1.1
SOCIOLOGY	2,056	1,462	-28.9	948	939	-.9	1,108	523	-52.8
OTHER, N.E.C.	2,618	4,798	83.3	973	926	-4.8	1,645	3,872	135.4
OTHER SCIENCES, N.E.C.	8,461	9,727	15.0	5,306	5,747	8.3	3,155	3,980	26.1

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-61. — CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT AT DOCTORATE-GRANTING INSTITUTIONS BY SCIENCE/ENGINEERING FIELD AND SOURCE OF FUNDS: FISCAL YEARS 1982 AND 1983

(DOLLARS IN THOUSANDS)

FIELD	TOTAL			FEDERALLY FINANCED			NON-FEDERAL		
	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83	1982	1983	PERCENT CHANGE 1982-83
TOTAL	397,089	425,057	7.0	259,560	266,648	2.7	137,529	158,409	15.2
ENGINEERING	64,536	73,951	14.6	41,463	48,102	13.3	22,073	25,849	17.1
AERONAUTICAL AND ASTRONAUTICAL	2,209	2,763	25.1	1,306	2,031	55.5	903	732	-18.9
CHEMICAL	6,423	6,163	-4.0	3,819	3,557	-6.9	2,604	2,606	.1
CIVIL	4,825	5,791	20.0	2,650	3,272	23.5	2,175	2,519	15.8
ELECTRICAL	18,094	20,447	13.0	13,770	14,353	4.2	4,324	6,094	40.9
MECHANICAL	7,257	9,848	35.7	4,147	6,447	55.5	3,110	3,398	9.3
OTHER, N.E.C.	25,728	28,942	12.5	16,771	18,442	10.0	8,957	10,500	17.2
PHYSICAL SCIENCES	75,314	76,478	1.5	60,788	60,517	-.4	14,526	15,961	9.9
ASTRONOMY	5,093	4,196	-17.6	3,914	3,426	-12.5	1,179	770	-34.7
CHEMISTRY	31,617	31,041	-1.8	23,788	22,626	-4.9	7,829	8,415	7.5
PHYSICS	32,278	34,902	8.1	27,883	29,061	4.2	4,395	5,841	32.9
OTHER, N.E.C.	6,326	6,339	.2	5,203	5,404	3.9	1,123	935	-16.7
ENVIRONMENTAL SCIENCES	27,151	29,799	9.6	17,575	18,675	6.3	9,576	11,084	15.7
ATMOSPHERIC	4,174	4,657	11.6	2,934	3,258	11.0	1,240	1,399	12.8
EARTH SCIENCES	10,135	11,079	9.3	6,031	6,234	3.4	4,104	4,845	18.1
OCEANOGRAPHY	8,700	10,657	22.5	5,947	6,740	13.3	2,753	3,917	42.3
OTHER, N.E.C.	4,142	3,366	-18.7	2,663	2,443	-8.3	1,479	923	-37.6
MATHEMATICAL/COMPUTER SCIENCES	13,979	17,188	23.0	9,542	11,408	19.6	4,437	5,780	30.3
MATHEMATICS	2,355	2,235	-5.1	1,490	1,379	-7.4	865	856	-1.0
COMPUTER SCIENCES	11,624	14,953	28.6	8,052	10,029	24.6	3,572	4,924	37.8
LIFE SCIENCES	196,289	203,711	3.8	117,498	115,165	-2.0	78,791	88,546	12.4
AGRICULTURAL SCIENCES	37,563	37,767	.5	10,521	9,883	-6.1	27,042	27,884	3.1
BIOLOGICAL SCIENCES	74,324	73,655	-.9	51,963	49,962	-3.9	22,361	23,693	6.0
MEDICAL SCIENCES	78,600	85,793	9.1	51,354	51,410	.1	27,246	34,343	26.0
OTHER, N.E.C.	5,802	6,546	12.7	3,660	3,910	6.8	2,142	2,626	22.6
PSYCHOLOGY	5,246	6,122	16.7	3,831	4,444	16.0	1,415	1,678	18.6
SOCIAL SCIENCES	6,235	8,291	33.0	2,609	2,677	2.6	3,626	5,614	54.8
ECONOMICS	1,593	1,802	13.1	645	703	9.0	948	1,099	15.9
POLITICAL SCIENCE	667	689	3.3	277	280	1.1	390	409	4.9
SOCIOLOGY	1,664	1,268	-23.8	826	816	-1.2	838	452	-46.1
OTHER, N.E.C.	2,311	4,532	96.1	861	878	2.0	1,450	3,654	152.0
OTHER SCIENCES, N.E.C.	8,339	9,557	14.6	5,254	5,660	7.7	3,085	3,897	26.3

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-42. — CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT AT UNIVERSITIES AND COLLEGES, BY SCIENCE/ENGINEERING FIELD, SOURCE OF FUNDS AND CONTROL: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

FIELD	TOTAL			FEDERALLY FINANCED			NON-FEDERAL		
	TOTAL	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE
TOTAL	435,402	280,771	154,631	273,076	156,429	116,647	162,326	124,342	37,984
ENGINEERING	75,171	44,268	30,903	48,837	24,145	24,692	26,334	20,123	6,211
AERONAUTICAL AND ASTRONAUTICAL	2,837	1,210	1,627	2,100	790	1,310	737	420	317
CHEMICAL	6,172	4,312	1,860	3,559	2,390	1,169	2,613	1,922	691
CIVIL	6,086	4,543	1,543	3,422	2,362	1,060	2,664	2,181	483
ELECTRICAL	20,685	11,907	8,778	14,516	7,564	6,950	6,169	4,341	1,828
MECHANICAL	10,008	5,351	4,657	6,563	2,808	3,755	3,445	2,543	902
OTHER, N.E.C.	29,383	16,945	12,438	18,677	8,229	10,448	10,706	8,716	1,990
PHYSICAL SCIENCES	79,153	49,931	29,222	62,137	37,477	24,660	17,016	12,454	4,562
ASTRONOMY	4,243	2,502	1,741	3,465	1,775	1,690	778	727	51
CHEMISTRY	32,826	21,892	10,934	23,632	15,751	7,881	9,194	6,141	3,053
PHYSICS	35,673	21,088	14,585	29,588	16,239	13,349	6,085	4,849	1,236
OTHER, N.E.C.	6,411	4,449	1,962	5,452	3,712	1,740	959	737	222
ENVIRONMENTAL SCIENCES	31,123	22,129	8,994	19,643	12,559	7,084	11,480	9,570	1,910
ATMOSPHERIC	4,025	3,993	1,032	3,617	2,666	951	1,408	1,327	81
EARTH SCIENCES	11,584	8,871	2,713	6,609	4,738	1,871	4,975	4,133	842
OCEANOGRAPHY	10,928	7,913	3,015	6,837	4,498	2,339	4,091	3,415	676
OTHER, N.E.C.	3,586	1,352	2,234	2,580	657	1,923	1,006	695	311
MATHEMATICAL/COMPUTER SCIENCES	18,177	8,942	9,235	11,705	5,216	6,489	6,472	3,726	2,746
MATHEMATICS	2,668	1,808	860	1,476	822	654	1,192	986	206
COMPUTER SCIENCES	15,509	7,134	8,375	10,229	4,394	5,835	5,280	2,740	2,540
LIFE SCIENCES	206,587	137,854	68,733	117,342	68,739	48,603	89,245	69,115	20,130
AGRICULTURAL SCIENCES	38,813	37,818	995	10,746	10,586	160	28,067	27,232	835
BIOLOGICAL SCIENCES	75,155	45,981	29,174	51,041	29,284	21,757	24,114	16,697	7,417
MEDICAL SCIENCES	85,942	49,928	36,014	51,546	27,128	24,418	34,396	22,800	11,596
OTHER, N.E.C.	6,677	4,127	2,550	4,009	1,741	2,268	2,668	2,386	282
PSYCHOLOGY	6,526	3,662	2,864	4,753	2,438	2,315	1,773	1,224	549
SOCIAL SCIENCES	8,938	6,998	1,940	2,912	1,637	1,275	6,026	5,361	665
ECONOMICS	1,911	1,403	508	728	489	239	1,183	914	269
POLITICAL SCIENCE	767	481	286	319	96	223	448	385	63
SOCIOLOGY	1,462	863	599	939	426	513	523	437	86
OTHER, N.E.C.	4,798	4,251	547	926	626	300	3,872	3,625	247
OTHER SCIENCES, N.E.C.	9,727	6,987	2,740	5,747	4,218	1,529	3,980	2,769	1,211

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-63. — CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD AND SOURCE OF FUNDS: FISCAL YEARS 1976-83 1/

(DOLLARS IN THOUSANDS)

FIELD	1976	1977	1979	1980	1981	1982	1983
ALL SOURCES, TOTAL	1,043,153	960,014	696,218	794,512	952,672	973,857	1,077,006
ENGINEERING	81,678	87,718	87,128	89,297	103,329	144,990	134,701
PHYSICAL SCIENCES	73,795	65,216	64,685	77,154	87,813	82,362	87,073
ENVIRONMENTAL SCIENCES	49,304	28,351	25,153	36,208	35,025	42,445	41,254
MATHEMATICAL/COMPUTER SCIENCES	24,684	25,136	27,282	32,318	30,517	35,986	33,116
LIFE SCIENCES	706,961	642,493	428,293	459,057	597,635	591,772	666,163
PSYCHOLOGY	9,131	12,702	7,060	17,982	10,991	13,061	17,359
SOCIAL SCIENCES	44,303	31,798	21,358	35,073	45,138	31,292	41,535
OTHER SCIENCES, N.E.C.	53,337	66,600	35,259	47,423	42,224	31,949	35,805
FEDERAL SOURCES, TOTAL	206,890	195,519	164,460	149,563	153,800	118,996	133,736
ENGINEERING	20,200	17,219	20,927	20,438	17,601	18,246	16,565
PHYSICAL SCIENCES	19,195	21,894	32,186	22,463	25,529	20,132	18,825
ENVIRONMENTAL SCIENCES	6,428	9,307	8,220	8,033	6,866	4,472	2,704
MATHEMATICAL/COMPUTER SCIENCES	2,052	1,882	2,983	5,653	4,944	5,254	4,540
LIFE SCIENCES	153,570	137,369	90,796	86,105	89,410	66,617	81,890
PSYCHOLOGY	1,967	2,398	1,740	2,002	1,580	1,110	1,627
SOCIAL SCIENCES	1,806	2,109	2,076	1,528	4,376	1,407	5,111
OTHER SCIENCES, N.E.C.	1,672	3,341	5,532	3,341	1,494	1,758	1,514
OTHER SOURCES, TOTAL	836,263	764,495	531,758	644,949	798,872	854,861	943,270
ENGINEERING	61,478	70,499	66,201	68,859	85,728	126,744	118,136
PHYSICAL SCIENCES	54,560	43,322	32,499	54,691	62,284	62,230	68,248
ENVIRONMENTAL SCIENCES	42,876	19,044	16,933	28,175	28,159	37,973	37,590
MATHEMATICAL/COMPUTER SCIENCES	22,632	23,254	24,299	26,665	25,573	30,732	48,576
LIFE SCIENCES	553,391	505,124	337,497	372,952	508,225	525,195	584,313
PSYCHOLOGY	7,164	10,304	5,320	15,980	9,411	11,951	15,732
SOCIAL SCIENCES	42,497	29,689	19,282	33,545	38,762	29,885	36,424
OTHER SCIENCES, N.E.C.	51,665	63,259	29,727	44,082	40,730	30,191	34,291

1/ DATA HERE NOT COLLECTED IN 1978.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-64. — CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY GEOGRAPHIC DISTRIBUTION AND SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS ...	1,077,006	134,701	87,073	41,254	53,116	666,163	17,359	41,935	35,805
NEW ENGLAND	34,460	4,916	5,610	4,101	3,515	10,489	842	1,016	3,971
CONNECTICUT	10,609	822	1,324	160	510	6,463	508	817	5
MAINE	0	0	0	0	0	0	0	0	0
MASSACHUSETTS	16,603	3,906	1,821	1,721	1,903	2,939	203	169	3,941
NEW HAMPSHIRE	595	67	207	0	0	289	0	27	5
RHODE ISLAND	5,757	12	2,216	2,217	1,058	127	127	0	0
VERMONT	896	109	42	3	44	671	4	3	20
MIDDLE ATLANTIC	141,214	19,006	11,392	6,196	13,103	83,250	3,180	3,637	1,450
NEW JERSEY	15,038	1,454	2,797	844	842	8,294	511	236	60
NEW YORK	75,001	6,850	5,295	715	1,248	57,782	373	1,821	717
PENNSYLVANIA	51,175	10,702	3,300	4,637	11,013	17,174	2,096	1,580	673
EAST NORTH CENTRAL	190,544	15,143	14,307	2,912	16,677	112,730	1,569	5,343	21,863
ILLINOIS	22,032	3,319	3,068	853	690	8,832	181	1,011	4,078
INDIANA	40,067	3,148	3,172	400	9,719	12,915	273	2,378	8,062
MICHIGAN	63,601	3,177	1,092	1,010	2,874	55,045	102	49	252
OHIO	30,490	4,208	6,234	220	876	16,495	180	1,480	797
WISCONSIN	34,354	1,291	741	429	2,518	19,443	833	425	8,674
WEST NORTH CENTRAL	103,551	11,329	3,850	868	2,849	82,878	475	780	522
IOWA	18,177	1,592	632	79	667	14,775	210	51	171
KANSAS	13,128	3,136	2,093	161	1,694	5,558	181	144	161
MINNESOTA	12,839	1,658	514	1	483	9,851	26	298	8
MISSOURI	46,410	2,180	453	574	0	42,876	56	271	0
NEBRASKA	10,914	2,661	3	0	1	8,243	2	4	0
NORTH DAKOTA	1,378	55	130	12	2	1,177	0	2	0
SOUTH DAKOTA	705	47	25	41	2	398	0	10	182
SOUTH ATLANTIC	119,048	14,758	7,386	3,325	2,526	69,286	657	20,553	557
DELAWARE	8,847	6,537	201	1,439	2	664	4	0	0
DISTRICT OF COLUMBIA	22,289	693	173	26	256	1,396	23	19,598	124
FLORIDA	12,805	4,686	805	264	137	6,466	160	156	131
GEORGIA	8,646	1,294	383	130	1,414	4,705	247	472	1
MARYLAND	27,327	872	4,522	445	216	20,749	112	227	184
NORTH CAROLINA	19,698	501	947	955	357	16,712	90	19	117
SOUTH CAROLINA	6,987	0	66	1	36	6,870	11	3	0
VIRGINIA	11,200	4	91	40	73	10,966	10	16	0
WEST VIRGINIA	1,249	171	198	25	35	758	0	62	0
EAST SOUTH CENTRAL	34,535	5,505	1,005	54	128	25,903	69	70	1,801
ALABAMA	15,466	4,825	105	0	90	10,438	3	0	5
KENTUCKY	6,616	243	562	0	0	4,029	0	0	1,782
MISSISSIPPI	969	1	1	0	27	929	0	0	11
TENNESSEE	11,484	436	337	54	11	10,507	66	70	3
WEST SOUTH CENTRAL	185,879	31,486	14,648	5,589	10,816	118,283	1,399	2,100	1,558
ARKANSAS	3,893	1,508	182	81	9	1,032	0	5	1,076
LOUISIANA	31,897	8,078	3,369	465	5,245	13,747	194	527	272
OKLAHOMA	20,804	6,681	968	2,030	308	9,209	1,110	490	8
TEXAS	129,285	15,219	10,129	3,013	5,254	94,295	95	1,078	202
MOUNTAIN	58,316	17,793	5,453	10,567	1,003	20,206	2,632	281	381
ARIZONA	15,596	10,113	957	358	72	3,811	14	89	182
COLORADO	3,906	821	989	511	78	1,351	83	73	0
IDAHO	699	99	37	8	1	548	0	6	0
MONTANA	616	18	3	92	1	502	0	0	0
NEVADA	11,323	35	1,267	3,558	0	3,937	2,440	0	86
NEW MEXICO	5,250	1,080	935	1,257	257	1,489	95	54	113
UTAH	12,954	1,111	1,111	4,500	594	5,579	0	59	0
WYOMING	7,972	4,516	154	283	0	3,019	0	0	0
PACIFIC	207,947	14,327	23,279	7,606	2,484	142,341	6,532	7,719	3,659
ALASKA	1,539	64	1	1,339	0	128	0	26	1
CALIFORNIA	140,607	12,458	16,398	3,666	1,668	95,698	6,242	2,988	1,489
HAWAII	13,573	0	5,139	1,720	54	2,982	0	3,678	0
OREGON	6,226	311	425	64	84	5,327	0	0	15
WASHINGTON	45,982	1,494	1,316	817	678	38,206	290	1,027	2,154
OUTLYING AREAS	1,512	438	143	36	15	797	4	36	43

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-65. — CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	1,077,006	134,701	87,073	41,254	53,116	646,163	17,359	41,535	35,805
1 UNIVERSITY OF MICHIGAN	55,598	2,018	454	0	0	53,126	0	0	0
2 UNIV OF SOUTHERN CAL	54,249	5,318	10,003	535	107	31,590	6,191	105	0
3 U TEX MED BRNCH GALVESTON	47,497	0	0	0	0	47,497	0	0	0
4 WASHINGTON UNIVERSITY	39,490	1,285	436	375	0	37,364	0	0	0
5 UNIVERSITY OF WASHINGTON	30,877	347	170	207	182	28,476	46	206	1,243
6 NEW YORK UNIVERSITY	24,836	0	130	130	13	24,422	2	139	0
7 UNIV OF CAL SAN FRANCISCO 1/	22,980	0	0	0	0	22,980	0	0	0
8 PURDUE UNIVERSITY	21,597	2,365	616	226	4,505	2,710	75	1,244	7,356
9 CARNEGIE-MELLON UNIV	20,741	7,458	1,291	314	7,590	1,317	1,730	775	466
10 JOHNS HOPKINS UNIVERSITY	20,406E	1951	7631	3071	41	19,1381	121	271	0
TOTAL, 1ST 10 INSTS.	338,231	18,946	13,853	2,094	14,701	269,020	8,046	2,496	9,565
11 GEORGETOWN UNIVERSITY	19,860	0	0	0	0	282	0	19,578	0
12 UNIV OF WIS-MADISON	19,444	594	318	312	1,426	12,594	780	230	3,190
13 UNIVERSITY OF OKLAHOMA	16,321	4,065	565	1,989	254	7,978	1,105	365	0
14 STANFORD UNIVERSITY	14,758	2,709	0	0	0	9,757	0	2,292	0
15 WASHINGTON STATE UNIV	14,504I	1,136I	940I	579I	344I	9,681I	126I	787I	911I
16 TEXAS COL OF OSTEO MED	14,000	0	0	0	0	14,000	0	0	0
17 INDIANA UNIVERSITY	13,986	471	1,887	166	51	9,940	189	1,105	177
18 UNIVERSITY OF NEW ORLEANS	13,943	2,752	2,669	0	4,743	3,779	0	0	0
19 UNIV OF HAWAII-MANOA	13,573	0	5,139	1,720	54	2,982	0	3,678	0
20 UNIV OF CAL DAVIS 1/	13,067	103	17	100	59	12,430	0	0	358
TOTAL, 1ST 20 INSTS.	491,687	30,776	25,388	6,960	21,132	352,443	10,256	30,531	14,201
21 COLUMBIA UNIV MAIN DIV	12,214I	247I	435I	75I	0	11,035I	0	422I	0
22 UNIVERSITY OF MINNESOTA	12,111	1,657	391	0	0	9,768	0	295	0
23 UNIVERSITY OF IOWA	11,826	233	0	0	0	11,593	0	0	0
24 UNIV OF TEXAS AT AUSTIN	11,670	7,044	2,052	2,351	0	223	0	0	0
25 UNIV OF NEVADA - RENO	11,323I	35I	1,267I	3,558I	0	3,937I	2,440I	0	86I
26 ARIZONA STATE UNIVERSITY	10,254	9,843	406	0	0	3	0	0	2
27 UNIV ALABAMA BIRMINGHAM	9,823	83	15	0	11	9,714	0	0	0
28 UNIV OF CAL IRVINE 1/	9,799	37	420	1,491	12	7,753	4	82	0
29 LOUISIANA STATE UNIV	9,569	4,631	548	292	27	4,054	13	4	0
30 VANDERBILT UNIVERSITY	9,369I	0	0	0	0	9,369I	0	0	0
TOTAL, 1ST 30 INSTS.	599,645	54,586	30,922	14,727	21,182	419,892	12,713	31,334	14,289
31 UNIVERSITY OF UTAH	9,109	1,105	1,111	4,281	412	2,141	0	59	0
32 UNIVERSITY OF DELAWARE	8,847	6,537	201	1,439	2	664	4	0	0
33 U TEXAS SYSTEM CANCER CTR	8,546	0	101	0	105	8,340	0	0	0
34 UNIV OF CAL LOS ANGELES 1/	8,274	48	2,293	66	14	5,443	0	271	139
35 ROCKEFELLER UNIVERSITY	8,214	0	2	0	0	8,208	4	0	0
36 UNIV OF ILL URBANA	3,130I	2,740I	1,383I	705I	211I	2,539I	157I	311I	77I
37 U OF NEB MED CTR AT OMAHA	8,124	0	0	0	0	8,124	0	0	0
38 UNIVERSITY OF FLORIDA	8,089	2,390	516	51	13	5,036	23	86	14
39 OHIO STATE UNIVERSITY	8,001E	1,149E	759E	48E	2E	6,043E	0	0	0
40 UNIVERSITY OF WYOMING	7,972	4,516	154	283	0	3,019	0	0	0
TOTAL, 1ST 40 INSTS.	682,951	73,031	37,442	21,600	21,941	469,449	12,901	32,068	14,519
41 MASS INST OF TECHNOLOGY	7,822	2,861	0	0	0	1,319	0	0	3,642
42 PENNSYLVANIA STATE UNIV	7,790	827	169	224	1,117	5,384	0	6	63
43 U TEX HLTH SCI CTR S ANTO	7,632	0	0	0	0	7,632	0	0	0
44 UNIV OF MED & DENT OF N J	7,549I	0	0	0	0	7,549I	0	0	0
45 VIRGINIA COMMONWLTH UNIV	7,089I	0	0	0	0	7,089I	0	0	0
46 MED UNIV OF SO CAROLINA	6,804	0	0	0	0	6,804	0	0	0
47 STEPHEN F AUSTIN ST UNIV	6,782	0	1,961	0	4,574	247	0	0	0
48 UNIV OF NC AT CHAPEL HILL	6,755	0	376	127	49	6,203	0	0	0
49 UNIVERSITY OF CHICAGO	6,619	0	997	0	0	1,574	0	281	3,767
50 UNIVERSITY OF CONNECTICUT	6,544	779	612	160	305	3,485	507	696	0
TOTAL, 1ST 50 INSTS.	754,337	77,498	41,557	22,111	27,986	516,735	13,408	33,051	21,991

SEE FOOTNOTES AT END OF TABLE.

TABLE B-65. — CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 UNIVERSITY OF KANSAS	6,446I	417I	323I	154I	1,565I	3,628I	172I	128I	59I
52 CORNELL UNIVERSITY	6,390	2,102	2,350	115	238	938	126	425	96
53 IOWA ST U OF SCI & TECH	6,304	1,359	625	79	666	3,153	201	90	171
54 MICHIGAN STATE UNIVERSITY	6,301	210	373	960	2,791	1,776	0	0	191
55 UNIV OF CAL BERKELEY 1/	5,965	2,510	1,210	31	793	1,290	0	131	0
56 RICE UNIVERSITY	5,850I	2,549I	1,315I	414I	449I	657I	47I	417I	0
57 BROWN UNIVERSITY	5,752	12	2,216	2,217	1,058	122	127	0	0
58 BOWLING GREEN STATE UNIV	5,453	0	4,222	54	25	1,101	8	3	40
59 U OF HOUSTON UNIV PARK	5,416	4,925	92	0	0	0	0	399	0
60 UNIV OF MISSOURI COLUMBIA	5,377	288	0	0	0	5,089	0	0	0
TOTAL, 1ST 60 INSTS.	813,551	91,870	54,283	26,137	35,571	534,489	14,089	34,604	22,548
61 UNIVERSITY OF ROCHESTER	5,374	578	38	0	11	4,541	57	149	0
62 PRINCETON UNIVERSITY	5,323	1,194	1,994	387	403	655	458	232	0
63 UNIVERSITY OF ARIZONA	5,147	214	498	339	72	3,744	[illegible]	86	180
64 TEMPLE UNIVERSITY	5,123I	54I	60I	0	1,400I	3,499I	0	110I	0
65 MEDICAL COLLEGE OF WIS	4,999I	0	0	0	0	4,999I	0	0	0
66 UNIV OF MD COLLEGE PARK	4,953I	342I	3,395I	47I	167I	791I	91I	105I	0
67 OREGON HLTH SCIENCES UNIV	4,900	0	0	0	0	4,900	0	0	0
68 LOUISIANA TECH UNIVERSITY	4,817	0	11	0	0	4,800	0	6	0
69 SUNY AT BUFFALO	4,626	796	0	0	0	3,830	0	0	0
70 UNIVERSITY OF LOUISVILLE	4,623	243	562	0	0	2,036	0	0	1,782
TOTAL, 1ST 70 INSTS.	863,461	95,201	60,841	26,910	37,624	568,284	14,709	35,492	24,510
71 AUBURN UNIVERSITY	4,583	4,559	20	0	0	4	0	0	0
72 BAYLOR COL OF MEDICINE	4,317	0	0	0	0	4,317	0	0	0
73 OKLAHOMA STATE UNIVERSITY	4,218I	2,519I	393I	40I	54I	1,140I	0	72I	0
74 DUKE UNIVERSITY	4,074	211	418	796	53	2,587	7	2	0
75 SLIPPERY ROCK UNIV OF PA	4,000	0	0	4,000	0	0	0	0	0
76 YALE UNIVERSITY	3,887	43	624	0	200	2,900	0	120	0
77 VA POLYTECH INST & ST U	3,867	0	0	17	0	3,850	0	0	0
78 UTAH STATE UNIVERSITY	3,845	6	0	219	182	3,438	0	0	0
79 TEXAS TECH UNIVERSITY	3,671	596	1,210	64	0	1,692	31	78	0
80 KANS ST U - AG & APP SCI	3,591	2,682	285	6	85	412	4	15	102
TOTAL, 1ST 80 INSTS.	903,514	105,907	63,791	32,052	38,198	588,624	14,751	35,579	24,612
81 EAST CAROLINA UNIVERSITY	3,550	0	33	21	191	3,291	2	3	9
82 UNIV OF ARK FAYETTEVILLE	3,418	1,508	179	80	0	581	0	4	1,066
83 U TEX HLTH SCI CTR DALLAS	3,392	0	0	0	0	3,392	0	0	0
84 SYRACUSE UNIVERSITY	3,301	657	1,014	74	198	684	155	242	277
85 BALL STATE UNIVERSITY	3,290	0	2	0	3,155	133	0	0	0
86 OHIO UNIVERSITY	3,103	304	0	0	0	2,792	7	0	0
87 UNIV OF ILL CHICAGO 2/	3,023	370	158	26	22	2,339	10	83	15
88 UNIVENSITY OF GEORGIA	2,976	98	80	320	117	2,157	32	382	0
89 PITTSBURG STATE UNIV	2,857	13	1,422	0	0	1,417	4	1	0
90 CASE WESTERN RESERVE UNIV	2,792	274	138	0	0	2,380	0	0	0
TOTAL, 1ST 90 INSTS.	935,211	109,131	66,817	32,363	41,881	607,790	14,961	36,294	25,979
91 UNIV OF NEBRASKA-LINCOLN	2,778I	2,661I	0	0	0	117I	0	0	0
92 UNIV OF CAL SAN DIEGO 1/	2,601	0	40	944	78	1,167	0	0	372
93 THE MEDICAL COL OF PENNA	2,461	0	0	0	0	2,461	0	0	0
94 GEORGIA INSTITUTE OF TECH	2,360	1,170	30	13	865	0	196	85	1
95 THOMAS JEFFERSON UNIV	2,350	0	0	0	0	2,350	0	0	0
96 UNIV OF PENNSYLVANIA	2,349	245	272	57	238	780	61	677	19
97 U TEX HLTH SCI CTR HOUSTN	2,317	0	0	0	0	2,317	0	0	0
98 FLORIDA ATLANTIC UNIV	2,269	2,029	170	0	0	12	43	15	0
99 WRIGHT STATE UNIVERSITY	2,224	19	0	38	3	1,541	1	0	622
100 NEW MEXICO STATE UNIV	2,224	584	305	49	247	791	92	43	113
TOTAL, 1ST 100 INSTS.	959,149	115,839	67,634	33,464	43,312	619,326	15,354	37,114	27,106
TOTAL, ALL OTHER INSTS.	117,857	18,862	19,439	7,790	9,804	46,837	2,005	4,421	8,699

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-66. — FEDERALLY FINANCED CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	133,736	16,565	18,825	3,704	4,540	81,850	1,627	5,111	1,514
1 UNIV OF SOUTHERN CAL	34,125	3,237	628	422	49	29,737	51	1	0
2 STANFORD UNIVERSITY	14,758	2,709	0	0	0	9,757	0	2,292	0
3 JOHNS HOPKINS UNIVERSITY	10,200E	20I	285I	208I	0I	9,665I	12I	10I	0
4 UNIV OF ILL URBANA	4,519I	1,934I	1,195I	322I	34I	963I	91I	7I	13I
5 CARNEGIE-MELLON UNIV	3,834	799	534	14	2,108	246	119	4	10
6 UNIVERSITY OF KANSAS	3,810I	251I	162I	48I	5I	3,243I	56I	45I	0I
7 CORNELL UNIVERSITY	3,764	1,251	1,953	48	188	219	60	20	25
8 UNIV OF MD COLLEGE PARK	3,525I	183I	2,829I	43I	2I	370I	86I	12I	0
9 DUKE UNIVERSITY	2,680	48	403	16	50	2,152	6	2	0
10 WASHINGTON STATE UNIV	2,484I	181I	246I	93I	24I	1,864I	27I	22I	27I
TOTAL, 1ST 10 INSTS.	83,699	10,613	8,195	1,214	2,463	58,216	508	2,415	75
11 UNIVERSITY OF UTAH	2,393	597	420	324	293	741	0	18	0
12 UNIVERSITY OF WASHINGTON	2,230	0	0	0	0	2,230	0	0	0
13 INDIANA UNIVERSITY	2,175	0	1,282	27	26	556	145	22	117
14 UNIVERSITY OF CONNECTICUT	2,023	251	206	58	28	1,200	235	45	0
15 UNIV OF CAL LOS ANGELES 1/	1,952	0	1,947	0	0	5	0	0	0
16 PRINCETON UNIVERSITY	1,801	275	587	138	182	160	361	98	0
17 UNIVERSITY OF GEORGIA	1,560	25	58	94	81	1,199	5	98	0
18 UNIVERSITY OF COLORADO	1,480	139	702	268	4	260	68	39	0
19 SAN FRANCISCO STATE UNIV	1,381	0	563	93	0	157	0	0	568
20 UNIV OF NC AT CHAPEL HILL	1,373	0	0	0	0	1,373	0	0	0
TOTAL, 1ST 20 INSTS.	102,067	11,900	13,960	2,216	3,077	66,097	1,322	2,735	760
21 GEORGETOWN UNIVERSITY	1,257	0	0	0	0	0	0	1,257	0
22 CALIFORNIA INST OF TECH	1,252	337	180	44	30	661	0	0	0
23 U TEX HLTH SCI CTR DALLAS	1,230	0	0	0	0	1,230	0	0	0
24 YESHIVA UNIVERSITY	1,182	0	0	0	0	1,182	0	0	0
25 UNIVERSITY OF NEW MEXICO	1,035I	324I	228I	202I	10I	258I	3I	10I	0
26 UNIV OF HAWAII-MANOA	941	0	941	0	0	0	0	0	0
27 UNIVERSITY OF KENTUCKY	934I	0	0	0	0	934I	0	0	0
28 SYRACUSE UNIVERSITY	905	226	127	2	54	181	27	187	181
29 RENSSELAER POLYTECH INST	836	612	104	12	53	21	14	18	2
30 US NAVAL ACADEMY	800	375	300	0	30	0	0	95	0
TOTAL, 1ST 30 INSTS.	112,439	13,774	15,840	2,476	3,254	70,564	1,366	4,322	943
31 UNIV OF SOUTHWESTERN LA	764I	111I	0I	45I	3I	7I	0I	434I	164I
32 U TEX MED BRNCH GALVESTON	762	0	0	0	0	762	0	0	0
33 OHIO UNIVERSITY	675	0	0	0	0	672	3	0	0
34 UNIVERSITY OF NOTRE DAME	647	144	443	0	0	34	1	0	25
35 AIR FORCE INST OF TECH	617	249	0	0	198	170	0	0	0
36 UNIV OF MD BALT PROF SCH	585I	0	0	0	0	585I	0	0	0
37 ROCKEFELLER UNIVERSITY	551	0	0	0	0	551	0	0	0
38 UNIVERSITY OF ROCHESTER	536	0	0	0	0	536	0	0	0
39 MEDICAL COLLEGE OF WIS	504I	0	0	0	0	504I	0	0	0
40 ST LOUIS UNIVERSITY	499I	0	0	161I	0	338I	0	0I	0
TOTAL, 1ST 40 INSTS.	118,579	14,278	16,283	2,682	3,485	74,723	1,370	4,656	1,132
41 WEST VIRGINIA UNIVERSITY	487	57	40	18	0	353	0	19	0
42 WAKE FOREST UNIVERSITY	485I	0	0I	0	0	464I	21I	0	0
43 TEXAS TECH UNIVERSITY	462	208	56	1	0	190	0	6	0
44 GEORGE WASHINGTON UNIV	454I	131I	20I	0I	56I	219I	3I	11I	14I
45 U TEX HLTH SCI CTR S ANTO	432	0	0	0	0	432	0	0	0
46 HOWARD UNIVERSITY	427	144	103	15	0	157	7	1	0
47 BOSTON COLLEGE	421I	0	261I	116I	0	31I	6I	7I	0
48 MERCER UNIVERSITY	401	0	0	0	401	0	0	0	0
49 OKLAHOMA STATE UNIVERSITY	394I	27I	42I	5I	2I	316I	0	2I	0
50 GEORGIA INSTITUTE OF TECH	384E	187E	5E	0	139E	0	53E	0	0
TOTAL, 1ST 50 INSTS.	122,925	15,032	16,810	2,837	4,053	76,885	1,460	4,702	1,146

SEE FOOTNOTES AT END OF TABLE.

TABLE B-66. — FEDERALLY FINANCED CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

	INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
51	TEMPLE UNIVERSITY	378I	0I	0I	0	0I	288I	0	90I	0
52	UNIVERSITY OF CINCINNATI	377	3	2	1	10	89	0	251	21
53	SOUTH DAKOTA STATE UNIV	355I	39I	25I	14I	0I	101I	0	4I	172I
54	UNIVERSITY OF IDAHO	342	95	16	2	1	263	0	5	0
55	UNIV OF WIS-MADISON	305	1	10	0	0	249	0	2	43
56	NEW MEXICO STATE UNIV	302	148	13	0	8	67	34	0	32
57	OREGON HLTH SCIENCES UNIV	300	0	0	0	0	300	0	0	0
58	UNIVERSITY OF FLORIDA	280	37	2	0	0	230	0	11	0
59	VIRGINIA COMMONWLTH UNIV	266I	0	0	0	0	266I	0	0	0
60	U TENNESSEE KNOXVILLE	257I	34I	123I	25I	0I	55I	19I	1I	0I
	TOTAL, 1ST 60 INSTS.	126,087	15,349	17,301	2,879	4,072	78,793	1,513	5,066	1,414
61	PENNSYLVANIA STATE UNIV	249	68	4	70	0	96	0	1	10
62	UNIVERSITY OF MINNESOTA	246	0	0	0	0	246	0	0	0
63	U OF NEB MED CTR AT OMAHA	227	0	0	0	0	227	0	0	0
64	UNIV OF ALASKA FAIRBANKS	226	0	0	189	0	37	0	0	0
65	FLORIDA ATLANTIC UNIV	223	163	43	0	0	0	17	0	0
66	NC AG & TECH STATE UNIV	220	0	0	0	0	220	0	0	0
67	KANS ST U - AG & APP SCI	213	23	171	0	0	18	1	0	0
68	SAN DIEGO STATE UNIV	209	83	0	5	0	115	0	6	0
69	UNIVERSITY OF N DAKOTA	196I	22I	124I	8I	0I	41I	0	1I	0
70	UNIV OF ILL CHICAGO 2/	173	35	0	0	0	138	0	0	0
	TOTAL, 1ST 70 INSTS.	128,269	15,749	17,343	3,151	4,072	79,931	1,531	5,074	1,424
71	DENISON UNIVERSITY	166I	0	1I	0	165I	0I	0I	0	0
72	MICHIGAN STATE UNIVERSITY	165	0	165	0	0	0	0	0	0
73	MICHIGAN TECH UNIVERSITY	153	110	23	5	6	9	0	0	0
74	UNIV OF MASS AT AMHERST	149	0	73	61	3	12	0	0	0
75	UNIVERSITY OF DENVER	144I	58I	77I	0	0	7I	0	2I	0
76	CLARKSON COLLEGE OF TECH	135	66	69	0	0	0	0	0	0
77	TUFTS UNIVERSITY	135I	4I	20I	0I	0I	106I	1I	4I	0
78	UNIV OF PENNSYLVANIA	134	0	40	0	65	24	5	0	0
79	WESLEYAN UNIVERSITY	134E	0	62E	0	5E	61E	1E	0	5E
80	UNIVERSITY OF PITTSBURGH	131	0	107	0	24	0	0	0	0
	TOTAL, 1ST 80 INSTS.	129,715	15,981	17,980	3,217	4,340	80,150	1,538	5,080	1,429
81	U OF ARKANSAS MED SCI CAM	126I	0	0	0	0	126I	0	0	0
82	RUTGERS THE ST UNIV OF NJ	122	0	0	122	0	0	0	0	0
83	UNIVERSITY OF OKLAHOMA	115	81	0	34	0	0	0	0	0
84	U OF MD BALTIMORE COUNTY	111	0	63	0	0	39	9	0	0
85	IOWA ST U OF SCI & TECH	107	0	95	0	0	12	0	0	0
86	UNIV OF P R-RIO PIEDRAS	107I	6I	11I	5I	1I	80I	1I	2I	1I
87	GEORGIA STATE UNIVERSITY	102	0	42	0	0	60	0	0	0
88	UNIV OF CENTRAL FLORIDA	102	87	0	0	13	2	0	0	0
89	OCCIDENTAL COLLEGE	102I	0	53I	4I	0	45I	0	0	0
90	UNIVERSITY OF ARIZONA	101	0	14	0	5	82	0	0	0
	TOTAL, 1ST 90 INSTS.	130,810	16,155	18,258	3,382	4,359	80,596	1,548	5,082	1,430
91	US MILITARY ACADEMY	100I	32I	53I	9I	6I	0	0	0	0
92	OREGON GRADUATE CENTER	99I	0	48I	51I	0	0	0	0	0
93	SAN JOSE STATE UNIVERSITY	98I	0I	0I	79I	19I	0I	0I	0I	0
94	DUQUESNE UNIVERSITY	96I	0	23I	0	0	73I	0	0	0
95	ILLINOIS BENEDICTINE COL	91I	0	0I	0	91I	0I	0	0	0I
96	MONT COL MINRL SCI & TECH	90I	8I	3I	79I	0I	0	0	0	0
97	OKLA PANHANDLE STATE UNIV	89I	81I	3I	0I	0	2I	3I	0I	0I
98	MEDICAL COL OF GEORGIA	88	0	0	0	0	88	0	0	0
99	DREXEL UNIVERSITY	83	83	0	0	0	0	0	0	0
100	BAYLOR COL OF MEDICINE	76	0	0	0	0	76	0	0	0
	TOTAL, 1ST 100 INSTS.	131,720	16,359	18,388	3,600	4,475	80,835	1,551	5,082	1,430
	TOTAL, ALL OTHER INSTS.	2,016	206	437	104	65	1,015	76	29	84

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-47. — NON-FEDERAL CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGI-NEERING	PHYSICAL SCIENCES	ENVIRON-MENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSY-CHOL-OGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	943,270	118,136	68,248	37,550	48,576	584,313	15,732	36,424	34,291
1 UNIVERSITY OF MICHIGAN	59,583	2,018	439	0	0	53,126	0	[illegible]	0
2 U TEX MED BRNCH GALVESTON	46,735	0	0	0	0	46,735	0	0	0
3 WASHINGTON UNIVERSITY	39,418	1,285	426	375	0	37,332	0	0	0
4 UNIVERSITY OF WASHINGTON	28,647	347	170	207	182	26,246	44	206	1,243
5 NEW YORK UNIVERSITY	24,836	0	130	130	13	24,422	2	139	0
6 UNIV OF CAL SAN FRANCISCO 1/	22,999	0	0	0	0	22,999	0	0	0
7 PURDUE UNIVERSITY	21,597	2,365	616	226	6,505	2,710	75	1,244	7,856
8 UNIV OF SOUTHERN CAL	20,124	2,081	9,375	113	58	2,253	6,140	104	0
9 UNIV OF WIS-MADISON	19,139	593	308	312	1,426	12,345	780	228	3,147
10 GEORGETOWN UNIVERSITY	18,603	0	0	0	0	282	0	18,321	0
TOTAL, 1ST 10 INSTS.	297,641	8,689	11,464	1,363	8,184	228,410	7,043	20,242	12,246
11 CARNEGIE-MELLON UNIV	16,907	6,69[illegible]	757	300	5,282	1,071	1,611	771	456
12 UNIVERSITY OF OKLAHOMA	16,206	3,[illegible]44	565	1,955	254	7,978	1,105	365	0
13 TEXAS COL OF OSTEO MED	14,000	0	0	0	0	14,000	0	0	0
14 UNIVERSITY OF NEW ORLEANS	13,943	2,752	2,669	0	4,743	3,779	0	0	0
15 UNIV OF CAL DAVIS 1/	13,067	103	17	100	59	12,430	0	0	358
16 UNIV OF HAWAII-MANOA	12,632	0	4,198	1,720	54	2,982	0	3,678	0
17 COLUMBIA UNIV MAIN DIV	12,214I	247I	435I	75I	0	11,035I	0	422I	0
18 WASHINGTON STATE UNIV	12,020I	955I	694I	486I	320I	7,817I	99I	765I	884I
19 UNIVERSITY OF MINNESOTA	11,865	1,657	391	0	0	9,522	0	295	0
20 UNIVERSITY OF IOWA	11,826	233	0	0	0	11,593	0	0	0
TOTAL, 1ST 20 INSTS.	432,321	25,279	21,190	5,999	18,896	310,617	9,858	26,538	13,944
21 INDIANA UNIVERSITY	11,811	471	605	139	25	9,384	44	1,083	60
22 UNIV OF TEXAS AT AUSTIN	11,670	7,044	2,052	2,351	0	223	0	0	0
23 UNIV OF NEVADA - RENO	11,320I	35I	1,267I	3,558I	0	3,934I	2,440I	0	86I
24 ARIZONA STATE UNIVERSITY	10,254	9,843	406	0	0	3	0	0	2
25 JOHNS HOPKINS UNIVERSITY	10,206E	135I	478I	99I	4I	9,473I	0I	171	0
26 UNIV ALABAMA BIRMINGHAM	9,823	83	15	0	11	9,714	0	0	0
27 UNIV OF CAL IRVINE 1/	9,799	37	420	1,491	12	7,753	4	82	0
28 LOUISIANA STATE UNIV	9,494	4,631	548	292	27	3,979	13	4	0
29 VANDERBILT UNIVERSITY	9,369I	0	0	0	0	9,369I	0	0	0
30 UNIVERSITY OF DELAWARE	8,847	6,537	201	1,439	2	664	4	0	0
TOTAL, 1ST 30 INSTS.	534,914	54,095	27,182	15,368	18,977	365,113	12,363	27,724	14,092
31 U TEXAS SYSTEM CANCER CTR	8,509	0	101	0	105	8,303	0	0	0
32 OHIO STATE UNIVERSITY	8,001E	1,149E	759E	48E	2E	6,043E	0	0	0
33 UNIVERSITY OF WYOMING	7,972	4,516	154	283	0	3,019	0	0	0
34 U OF NEB MED CTR AT OMAHA	7,897	0	0	0	0	7,897	0	0	0
35 MASS INST OF TECHNOLOGY	7,822	2,861	0	0	0	1,319	0	0	3,642
36 UNIVERSITY OF FLORIDA	7,809	2,313	514	51	13	4,806	23	75	14
37 ROCKEFELLER UNIVERSITY	7,663	0	2	0	0	7,657	4	0	0
38 PENNSYLVANIA STATE UNIV	7,541	759	165	154	1,117	5,288	0	5	53
39 UNIV OF MED & DENT OF N J	7,481I	0	0	0	0	7,481I	0	0	0
40 U TEX HLTH SCI CTR S ANTO	7,200	0	0	0	0	7,200	0	0	0
TOTAL, 1ST 40 INSTS.	612,809	65,693	28,877	15,904	20,214	424,126	12,390	27,804	17,801
41 VIRGINIA COMMONWLTH UNIV	6,823I	0	0	0	0	6,823I	0	0	0
42 MED UNIV OF SO CAROLINA	6,804	0	0	0	0	6,804	0	0	0
43 STEPHEN F AUSTIN ST UNIV	6,782	0	1,961	0	4,574	247	0	0	0
44 UNIVERSITY OF UTAH	6,716	508	691	3,957	119	1,400	0	41	0
45 UNIVERSITY OF CHICAGO	6,619	0	497	0	0	1,574	0	281	3,767
46 UNIV OF CAL LOS ANGELES 1/	6,322	48	346	66	14	5,438	0	271	139
47 IOWA ST U OF SCI & TECH	6,197	1,399	530	79	666	3,141	201	50	171
48 MICHIGAN STATE UNIVERSITY	6,136	210	208	960	2,791	1,776	0	0	191
49 UNIV OF CAL BERKELEY 1/	5,965	2,510	1,210	31	793	1,290	0	131	0
50 RICE UNIVERSITY	5,850I	2,349I	1,315I	416I	449I	657I	47I	417I	0
TOTAL, 1ST 50 INSTS.	677,023	72,877	36,135	21,413	29,620	453,276	[illegible]	28,995	22,069

SEE FOOTNOTES AT END OF TABLE.

TABLE B-67. — NON-FEDERAL CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

- CONTINUED

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
51 BROWN UNIVERSITY	5,752	12	2,216	2,217	1,058	122	127	0	0
52 BOWLING GREEN STATE UNIV	5,453	0	4,222	54	25	1,101	8	3	40
53 U OF HOUSTON UNIV PARK	5,414	4,925	92	0	0	0	0	399	0
54 UNIV OF NC AT CHAPEL HILL	5,382	0	376	127	49	4,830	0	0	0
55 UNIV OF MISSOURI COLUMBIA	5,377	288	0	0	0	5,089	0	0	0
56 UNIVERSITY OF ARIZONA	5,046	214	484	339	67	3,662	14	86	180
57 UNIVERSITY OF ROCHESTER	4,838	578	38	0	11	4,005	57	149	0
58 LOUISIANA TECH UNIVERSITY	4,812	0	11	0	0	4,795	0	6	0
59 TEMPLE UNIVERSITY	4,745I	54I	60I	0	1,400I	3,211I	0	20I	0
60 SUNY AT BUFFALO	4,626	796	0	0	0	3,830	0	0	0
TOTAL, 1ST 60 INSTS.	728,470	79,744	43,634	24,150	32,230	483,921	12,844	29,658	22,289
61 UNIVERSITY OF LOUISVILLE	4,623	243	562	0	0	2,036	0	0	1,782
62 OREGON HLTH SCIENCES UNIV	4,600	0	0	0	0	4,600	0	0	0
63 AUBURN UNIVERSITY	4,583	4,559	20	0	0	4	0	0	0
64 UNIVERSITY OF CONNECTICUT	4,521	528	406	102	277	2,285	272	651	0
65 MEDICAL COLLEGE OF WIS	4,495I	0	0	0	0	4,495I	0	0	0
66 BAYLOR COL OF MEDICINE	4,241	0	0	0	0	4,241	0	0	0
67 SLIPPERY ROCK UNIV OF PA	4,000	0	0	4,000	0	0	0	0	0
68 YALE UNIVERSITY	3,887	43	624	0	200	2,900	0	120	0
69 VA POLYTECH INST & ST U	3,867	0	0	17	0	3,850	0	0	0
70 UTAH STATE UNIVERSITY	3,845	6	0	219	182	3,438	0	0	0
TOTAL, 1ST 70 INSTS.	771,132	85,123	45,246	28,488	32,889	511,770	13,116	30,429	24,071
71 OKLAHOMA STATE UNIVERSITY	3,824I	2,492I	351I	35I	52I	824I	0	70I	0
72 UNIV OF ILL URBANA	3,611I	306I	228I	383I	177I	1,576I	66I	311I	64I
73 EAST CAROLINA UNIVERSITY	3,550	0	33	21	191	3,291	2	3	9
74 PRINCETON UNIVERSITY	3,522	919	1,407	249	221	495	97	134	0
75 UNIV OF ARK FAYETTEVILLE	3,418	1,508	179	80	0	581	0	4	1,066
76 KANS ST U - AG & APP SCI	3,378	2,659	114	6	85	394	3	15	102
77 BALL STATE UNIVERSITY	3,290	0	2	0	3,155	133	0	0	0
78 TEXAS TECH UNIVERSITY	3,210	388	1,154	63	0	1,502	31	72	0
79 PITTSBURG STATE UNIV	2,857	13	1,422	0	0	1,417	4	1	0
80 UNIV OF ILL CHICAGO 2/	2,850	335	158	26	22	2,201	10	83	15
TOTAL, 1ST 80 INSTS.	804,642	94,243	50,294	29,351	36,792	524,184	13,329	31,122	25,327
81 UNIV OF NEBRASKA-LINCOLN	2,778I	2,661I	0	0	0	117I	0	0	0
82 CASE WESTERN RESERVE UNIV	2,720	274	138	0	0	2,308	0	0	0
83 UNIVERSITY OF KANSAS	2,636I	166I	161I	106I	1,560I	385I	116I	83I	59I
84 CORNELL UNIVERSITY	2,626	851	397	67	50	719	66	405	71
85 UNIV OF CAL SAN DIEGO 1/	2,584	0	40	944	78	1,150	0	0	372
86 THE MEDICAL COL OF PENNA	2,461	0	0	0	0	2,461	0	0	0
87 OHIO UNIVERSITY	2,428	304	0	0	0	2,120	4	0	0
88 SYRACUSE UNIVERSITY	2,396	431	887	72	144	503	228	135	96
89 THOMAS JEFFERSON UNIV	2,390	0	0	0	0	2,390	0	0	0
90 U TEX HLTH SCI CTR HOUSTN	2,317	0	0	0	0	2,317	0	0	0
TOTAL, 1ST 90 INSTS.	829,938	98,930	51,917	30,540	38,624	538,614	13,643	31,745	25,925
91 WRIGHT STATE UNIVERSITY	2,224	19	0	38	3	1,541	1	0	622
92 UNIV OF PENNSYLVANIA	2,215	245	232	57	173	756	56	677	19
93 N C STATE UNIV AT RALEIGH	2,193	79	36	0	50	1,920	0	0	108
94 UNIV OF TEX AT ARLINGTON	2,173	82	298	0	0	1,680	0	113	0
95 U TEX HLTH SCI CTR DALLAS	2,162	0	0	0	0	2,162	0	0	0
96 SOUTHWEST TEXAS ST UNIV	2,119	0	250	0	73	1,795	1	0	0
97 UNIVERSITY OF AKRON	2,047	1,694	116	14	0	46	16	161	0
98 FLORIDA ATLANTIC UNIV	2,046	1,866	127	0	0	12	26	15	0
99 UNIV OF WIS-MILWAUKEE	1,995	221	100	0E	8	241	32	61	1,332E
100 GEORGIA INSTITUTE OF TECH	1,976E	983E	29E	13E	726E	0	143E	85E	1E
TOTAL, 1ST 100 INSTS.	851,088	104,119	53,101	30,642	39,657	548,767	13,918	32,857	28,007
TOTAL, ALL OTHER INSTS.	92,182	14,017	15,147	6,888	8,919	35,546	1,814	3,567	6,284

1/ THE UNIVERSITY OF CALIFORNIA SYSTEM REPORTED SIGNIFICANT CHANGES IN FY 1983 COMPARED TO PREVIOUS YEARS, AS THE RESULT OF RECLASSIFYING SCIENCE AND ENGINEERING (S/E) AWARDS AND RESTRUCTURING SOME S/E DEPARTMENTS.

2/ DATA REPRESENT COMBINED TOTALS FOR THE UNIVERSITY OF ILLINOIS CHICAGO CIRCLE AND THE UNIVERSITY OF ILLINOIS MEDICAL CENTER.

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.

SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-48. — R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY YEAR AND CHARACTER OF WORK: FISCAL YEARS 1953-83

(DOLLARS IN MILLIONS)

FISCAL YEAR	TOTAL	BASIC RESEARCH		APPLIED RESEARCH AND DEVELOPMENT	
		AMOUNT	PERCENT OF TOTAL	AMOUNT	PERCENT OF TOTAL
1953	121	33	27.3%	88	
1954	141	39	27.7	102	
1955	180	49	27.2	131	72.8
1956	194	51	26.3	143	73.7
1957	240	65	27.1	175	72.9
1958	293	78	26.6	215	73.4
1959	338	92	27.2	246	72.8
1960	360	97	26.9	263	73.1
1961	410	115	28.0	295	72.0
1962	470	136	28.9	334	71.1
1963	530	159	30.0	371	70.0
1964	629	191	30.4	438	69.6
1965	629	208	33.1	421	66.9
1966	630	227	36.0	403	64.0
1967	673	250	37.1	423	62.9
1968	719	276	38.4	443	61.6
1969	725	275	37.9	450	62.1
1970	737	269	36.5	468	63.5
1971	716	260	36.3	456	63.7
1972	753	244	32.4	509	67.6
1973	817	296	36.2	521	63.8
1974	865	285	32.9	580	67.1
1975	987	309	31.3	678	68.7
1976	1,147	359	31.3	788	68.7
1977	1,384	402	29.0	982	71.0
1978 1/	1,717	-	-	-	-
1979	1,935	718	37.1	1,216	62.8
1980	2,246	786	35.0	1,460	65.0
1981	2,486	863	34.7	1,623	65.3
1982	2,479	870	35.1	1,609	64.9
1983	2,737	982	35.9	1,754	64.1

1/ DATA WERE NOT COLLECTED IN 1978.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-69. — R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL	1,146,712	1,383,814	1,716,911	1,934,797	2,245,773	2,485,853	2,478,721	2,736,652
CHARACTER OF WORK: 1/								
BASIC RESEARCH	358,811	402,168	-	718,303	785,774	863,179	869,701	982,272
APPLIED RESEARCH AND DEVELOPMENT	787,901	981,646	-	1,216,494	1,459,999	1,622,674	1,609,020	1,754,380
FIELD:								
ENGINEERING, TOTAL 2/	299,683	380,420	522,213	561,083	644,910	656,426	636,158	944,952
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	24,778	60,339	59,409	69,057
CHEMICAL	-	-	-	-	38,406	47,454	44,988	45,832
CIVIL	-	-	-	-	18,374	16,052	17,952	13,378
ELECTRICAL	-	-	-	-	200,981	169,05[illegible]	171,470	316,652
MECHANICAL	-	-	-	-	134,858	185,448	[illegible]1,017	339,573
OTHER, N.E.C.	-	-	-	-	226,013	178,074	[illegible],322	160,460
ALL SCIENCES, TOTAL	847,029	1,003,394	1,194,698	1,373,714	1,600,863	1,829,427	1,842,563	1,791,700
PHYSICAL SCIENCES	622,887	736,802	854,455	1,003,562	1,127,323	1,270,539	1,315,626	1,196,457
ASTRONOMY	32,452	41,500	38,452	46,099	59,025	67,578	65,885	73,498
CHEMISTRY	96,268	111,564	97,529	101,142	150,540	167,148	161,548	200,905
PHYSICS	376,632	447,110	568,040	584,519	829,217	950,865	982,245	885,500
OTHER, N.E.C.	117,535	136,628	150,434	271,802	88,541	84,948	105,948	36,954
ENVIRONMENTAL SCIENCES 2/	77,476	100,981	128,217	141,100	174,724	186,526	157,962	154,642
ATMOSPHERIC	-	-	-	-	35,703	48,433	55,325	56,749
EARTH SCIENCES	-	-	-	-	59,990	42,715	37,334	37,795
OCEANOGRAPHY	-	-	-	-	4,306	14,276	12,201	13,048
OTHER, N.E.C.	-	-	-	-	74,725	81,102	53,102	47,030
MATH/COMPUTER SCIENCES	71,641	78,584	119,203	126,850	162,114	226,627	119,197	289,614
MATHEMATICS	22,063	15,358	8,100	6,614	31,089	38,561	42,091	65,340
COMPUTER SCIENCES	49,578	63,226	111,103	120,236	131,025	188,066	77,106	224,274
LIFE SCIENCES	50,198	57,949	58,439	73,441	76,889	85,164	84,269	104,484
AGRICULTURAL SCIENCES	0	354	1,206	1,551	645	570	2,528	1,008
BIOLOGICAL SCIENCES	38,253	43,569	48,154	62,659	57,006	66,406	62,180	76,437
MEDICAL SCIENCES	5,081	4,761	7,963	7,179	8,194	8,453	8,575	9,555
OTHER, N.E.C.	6,864	9,265	1,116	2,052	11,044	9,735	10,986	17,484
PSYCHOLOGY	92	87	103	110	135	147	155	194
SOCIAL SCIENCES	1,288	3,301	5,119	5,861	17,449	20,984	21,412	21,067
ECONOMICS	1,277	3,280	3,875	3,735	9,457	6,002	4,556	4,254
POLITICAL SCIENCE	0	0	1,244	2,126	2,422	3,439	3,427	3,995
SOCIOLOGY	0	0	0	0	1,500	3,259	2,471	0
OTHER, N.E.C.	11	21	0	0	3,870	9,284	10,941	12,858
OTHER SCIENCES, N.E.C.	23,447	25,690	29,162	22,790	42,229	39,440	47,942	25,242

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-70. — FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY CHARACTER OF WORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1976-83

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1976	1977	1978	1979	1980	1981	1982	1983
TOTAL	1,139,983	1,377,114	1,708,790	1,929,154	2,235,794	2,462,626	2,438,680	2,697,078
CHARACTER OF WORK: 1/								
BASIC RESEARCH	357,644	401,345	-	716,057	781,262	857,467	856,810	968,204
APPLIED RESEARCH AND DEVELOPMENT	782,339	975,769	-	1,213,097	1,454,532	1,605,159	1,581,870	1,728,874
FIELD:								
ENGINEERING 2/	298,382	378,852	520,442	558,324	640,744	648,336	621,527	932,483
AERONAUTICAL AND ASTRONAUTICAL	-	-	-	-	24,769	60,247	59,285	48,958
CHEMICAL	-	-	-	-	38,086	46,960	44,184	45,197
CIVIL	-	-	-	-	18,580	15,686	17,116	13,112
ELECTRICAL	-	-	-	-	199,929	167,399	167,753	213,091
MECHANICAL	-	-	-	-	134,606	181,996	175,136	323,976
OTHER, N.E.C.	-	-	-	-	224,774	176,048	158,053	158,149
PHYSICAL SCIENCES	619,202	733,575	849,460	1,002,515	1,125,256	1,261,355	1,304,343	1,182,012
ASTRONOMY	32,452	41,500	38,452	46,099	99,012	67,419	65,653	73,265
CHEMISTRY	95,835	111,138	97,264	101,108	190,392	164,824	158,488	196,988
PHYSICS	374,921	445,221	566,545	583,654	827,500	944,671	974,795	875,316
OTHER, N.E.C.	115,994	135,716	147,199	271,654	88,452	84,441	105,447	36,443
ENVIRONMENTAL SCIENCES 2/	76,216	99,525	127,122	140,343	172,784	183,945	148,213	147,248
ATMOSPHERIC	-	-	-	-	35,408	48,084	48,538	51,069
EARTH SCIENCES	-	-	-	-	99,265	41,421	35,785	37,039
OCEANOGRAPHY	-	-	-	-	4,254	14,010	12,201	13,068
OTHER, N.E.C.	-	-	-	-	73,857	80,430	51,689	46,072
MATHEMATICAL/COMPUTER SCIENCES	71,541	78,479	119,203	126,850	160,804	224,734	217,839	287,401
MATHEMATICS	21,971	15,262	8,100	6,614	31,030	37,865	41,064	64,174
COMPUTER SCIENCES	49,570	63,217	111,103	120,236	129,774	186,869	176,775	223,227
LIFE SCIENCES	49,842	57,641	58,242	73,084	76,450	84,235	82,903	102,468
AGRICULTURAL SCIENCES	0	334	1,206	1,551	645	500	2,524	1,008
BIOLOGICAL SCIENCES	38,070	43,441	47,995	62,357	56,653	65,827	60,815	74,924
MEDICAL SCIENCES	5,072	4,753	7,925	7,124	8,125	8,394	8,903	9,471
OTHER, N.E.C.	6,700	9,093	1,116	2,052	11,027	9,514	10,661	17,065
PSYCHOLOGY	92	87	103	110	135	147	155	194
SOCIAL SCIENCES	1,277	3,280	5,119	5,861	17,422	20,657	20,483	20,196
ECONOMICS	1,277	3,280	3,875	3,725	9,647	6,002	4,124	3,786
POLITICAL SCIENCE	0	0	1,244	2,136	2,419	3,386	3,350	3,880
SOCIOLOGY	0	0	0	0	1,496	2,206	2,409	0
OTHER, N.E.C.	0	0	0	0	3,860	9,063	10,600	12,530
OTHER SCIENCES, N.E.C.	23,431	25,675	29,099	22,367	42,099	39,217	43,627	25,076

1/ DATA WERE NOT COLLECTED IN 1978.
2/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-71. — R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS BY SCIENCE/ENGINEERING FIELD: FISCAL YEAR 1983

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL	ENGINEERING	PHYSICAL SCIENCES	ENVIRONMENTAL SCIENCES	MATH & COMPUTER SCIENCES	LIFE SCIENCES	PSYCHOLOGY	SOCIAL SCIENCES	OTHER SCIENCES
TOTAL, ALL INSTITUTIONS	2,736,652	944,952	1,196,457	154,642	289,614	104,484	194	21,067	25,242
1 LAWRENCE LIVERMORE LAB (UNIV OF CALIFORNIA)	564,227	304,647	159,035	20,234	64,052	16,239	0	0	0
2 LOS ALAMOS NATIONAL LAB (UNIV OF CALIFORNIA)	544,363	168,235	266,915	14,562	45,389	26,955	0	15,801	6,506
3 JET PROPULSION LABORATORY (CALIFORNIA INST OF TECH)	436,017	180,075	70,548	33,355	152,039	0	0	0	0
4 ARGONNE NATL LABORATORY (UNIV OF CHICAGO)	215,230	108,647	63,144	27,911	3,032	12,496	0	0	0
5 LINCOLN LABORATORY (MASS INST OF TECHNOLOGY)	193,717	136,570	37,194	0	19,759	0	194	0	0
6 BROOKHAVEN NAT'L LAB (AUI) 1/	178,908	28,061	116,700	9,368	597	21,244	0	2,814	124
7 PLASMA PHYSICS LABORATORY (PRINCETON UNIV)	135,255	0	135,255	0	0	0	0	0	0
8 LAWRENCE BERKELEY LAB (UNIV OF CALIFORNIA)	130,756E	12,331E	77,566E	13,174E	4,125E	22,459E	0	0	1,101E
9 FERMI NAT ACCELERATOR LAB (URA) 2/	130,444	0	130,444	0	0	0	0	0	0
10 STFRD LINEAR ACCELRTR CTR (STANFORD UNIVERSITY)	78,178	0	78,178	0	0	0	0	0	0
TOTAL, 1ST 10 INSTS.	2,607,095	938,586	1,134,979	118,604	288,993	99,393	194	18,615	7,731
11 NATL CTR ATMOSPHERIC RES (UCAR) 3/	39,019	0	4,390	34,629	0	0	0	0	0
12 AMES LABORATORY (IOWA STATE UNIV OF S&T)	18,955	6,366	11,827	110	621	31	0	0	0
13 CENTER FOR NAVAL ANALYSES (UNIV OF ROCHESTER)	17,882	0	0	0	0	0	0	371	17,511
14 NAT'L RADIO ASTRONOMY OBS (AUI) 1/	15,118	0	15,118	0	0	0	0	0	0
15 KITT PEAK NAT'L OBSERVTRY (AURA) 4/	13,300	0	13,300	0	0	0	0	0	0
16 OAK RIDGE INST NUCLR STDS (ORAU) 5/	9,156	0	2,015	0	0	5,060	0	2,081	0
17 CERRO TOLOLO INTER-AN OBS (AURA) 4/	7,136	0	7,136	0	0	0	0	0	0
18 NAT'L ASTRON & IONOS CTR (CORNELL UNIVERSITY)	6,497	0	5,198	1,299	0	0	0	0	0
19 SACRAMENTO PEAK OBSERVTRY (AURA) 4/	2,494	0	2,494	0	0	0	0	0	0
TOTAL, 1ST 19 INSTS.	2,736,652	944,952	1,196,457	154,642	289,614	104,484	194	21,067	25,242

1/ ASSOCIATED UNIVERSITIES, INC.
2/ UNIVERSITIES RESEARCH ASSOCIATION
3/ UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH
4/ ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC.
5/ OAK RIDGE ASSOCIATED UNIVERSITIES
NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

TABLE B-72. — R&D EXPENDITURES AT UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS: FISCAL YEARS 1980-83

(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	TOTAL				FEDERALLY FINANCED			
	1983	1982	1981	1980	1983	1982	1981	1980
TOTAL, ALL INSTITUTIONS	2,736,652	2,478,721	2,485,853	2,245,773	2,697,078	2,438,680	2,462,626	2,235,794
1 LAWRENCE LIVERMORE LAB	564,227	487,350	466,765	401,115	555,037	479,407	463,337	398,794
2 LOS ALAMOS NATIONAL LAB	544,363	497,346	442,107	375,392	530,476	481,837	431,563	374,304
3 JET PROPULSION LABORATORY	436,017	393,121	411,386	385,530	436,017	393,121	411,386	385,530
4 ARGONNE NATL LABORATORY	215,230	230,483	314,157	286,676	210,950	226,154	311,647	284,364
5 LINCOLN LABORATORY	193,717	154,841	147,109	135,040	193,717	154,841	147,109	135,040
6 BROOKHAVEN NAT'L LAB	178,908	168,409	160,419	148,621	178,908	168,409	160,419	148,335
7 PLASMA PHYSICS LABORATORY	135,255	115,614	128,548E	126,027E	134,208	115,454	128,459E	125,940E
8 LAWRENCE BERKELEY LAB	130,756E	128,193	135,598	130,632	125,828E	123,361	129,383	127,094
9 FERMI NAT ACCELERATOR LAB	130,444	108,711	95,509	83,222	130,444	108,711	95,509	83,222
10 STFRD LINEAR ACCELRTR CTR	78,178	70,687	66,516	66,544	78,178	70,687	66,516	66,544
TOTAL, 1ST 10 INSTS.	2,607,095	2,354,725	2,368,114	2,138,799	2,573,763	2,321,982	2,345,328	2,129,167
11 NATL CTR ATMOSPHERIC RES	39,019	39,070	34,196	33,893	33,454	32,332	31,855	33,673
12 AMES LABORATORY	18,955	18,465	19,711	16,704	18,955	18,465	19,711	16,704
13 CENTER FOR NAVAL ANALYSES	17,882	16,501	15,357	14,031	17,882	16,501	15,357	14,031
14 NAT'L RADIO ASTRONOMY OBS	15,119	13,722	13,750	12,032	15,118	13,722	13,750	12,032
15 KITT PEAK NAT'L OBSERVTRY	13,300	12,087	12,453	10,802	13,300	12,087	12,453	10,802
16 OAK RIDGE INST NUCLR STDS	9,156	9,6[illegible]	8,507	7,928	8,479	9,090	8,407	7,801
17 CERRO TOLOLO INTER-AM OBS	7,136	6,[illegible]16	5,989	4,865	7,136	6,016	5,989	4,865
18 NAT'L ASTRON & IONOS CTR	6,497	6,158	5,575	4,477	6,497	6,158	5,575	4,477
19 SACRAMENTO PEAK OBSERVTRY	2,494	[illegible],367	2,201	2,242	2,494	2,367	2,201	2,242
TOTAL, 1ST 19 INSTS.	2,736,652	2,47[illegible],721	2,485,853	2,245,773	2,697,078	2,438,680	2,462,626	2,235,794

NOTE: NUMBERS FOLLOWED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOWED BY "I" ARE IMPUTED.
DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOWED BY "C" INDICATE CONFIDENTIAL DATA.
SOURCE: NATIONAL SCIENCE FOUNDATION

section c

university-administered ffrdc's: fy 1983

department of defense

Center for Naval Analyses (University of Rochester).

Lincoln Laboratory (Massachusetts Institute of Technology).

department of energy

Ames Laboratory (Iowa State University of Science and Technology).

Argonne National Laboratory (University of Chicago and Argonne Universities Association).

Brookhaven National Laboratory (Associated Universities, Inc.).

E. O. Lawrence Berkeley Laboratory (University of California).

E. O. Lawrence Livermore Laboratory (University of California).

Los Alamos Scientific Laboratory (University of California).

Fermi National Accelerator Laboratory (Universities Research Association).

Oak Kidge Institute of Nuclear Studies (Oak Ridge Associated Universities).

Plasma Physics Laboratory (Princeton University).

Stanford Linear Accelerator Center (Stanford University).

national aeronautics and space administration

Jet Propulsion Laboratory (California Institute of Technology).

national science foundation

Cerro Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.).

National Astronomy and Ionosphere Center (Cornell University).

Kitt Peak National Observatory (Association of Universities for Research in Astronomy, Inc.).

National Center for Atmospheric Research (University Corporation for Atmospheric Research).

National Radio Astronomy Observatory (Associated Universities, Inc.).

Sacramento Peak Observatory (Association of Universities for Research in Astronomy, Inc.).

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section d

reproduction of survey instruments

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Universities and colleges (includes aggregate data from 562 institutions 13
University-administered federally funded research and development centers (FFRDC's)
(includes data from 19 centers) 14
Crosswalk 14

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NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

Re: Survey of Scientific and Engineering Expenditures
at Universities and Colleges, FY 1983

Dear Colleague:

This survey is one element of the system that makes up the Integrated Data Base covering scientific and engineering (S/E) resources at academic and selected nonprofit institutions. This data base is managed by the Universities and Nonprofit Institutions Studies Group (UNISG), Mrs. Penny D. Foster, Study Director. Information for the survey is solicited under the authority of the National Science Foundation Act of 1950, as amended. Your participation in it is entirely voluntary, and failure to participate will not affect your institution adversely in any way. Information provided is for statistical use only.

This package contains:

1983 S/E Expenditure Survey Form 411, with instructions
Facsimile
NSF/NCES "Crosswalk" defining S/E fields
Postcard to notify NSF of receipt of package
Envelope for mailing completed form
Optional flow chart

THE 1983 SURVEY FORM 411 WITH INSTRUCTIONS

The 1983 form requests the same information as the 1982 form. In an effort to maintain consistency among NSF field of science/engineering codes and the NCES Classification of Instructional Programs (NCES 81-323) we have moved two of the disciplines—ceramic engineering from chemical engineering to other engineering; and marine engineering from civil engineering to other engineering. A facsimile is attached that shows data received from your institution.

NSF/NCES CROSSWALK

The crosswalk connects NSF's S/E fields with the National Center for Education Statistics Classification of Instructional Programs (NCES 81-323). It is provided to aid respondents whose institutional recordkeeping systems are organized according to NCES classifications.

POSTCARD

As soon as you receive this survey package, please let us know by filling out and mailing the postcard enclosed, stating the name and telephone number of the person completing the survey form.

RETURN ENVELOPE

A return, postage-paid envelope is provided for your use in sending in the completed survey form.

NSF CONTACT

If questions arise when completing the survey form, please call Ms. Judith Coakley or Ms. Marge Machen at (202) 634-4673. Thank you for your efforts in providing timely and meaningful statistics to NSF.

Penny D. Foster

Penny D. Foster
Study Director
Universities and Nonprofit Institutions
Studies Group
Division of Science Resources Studies

Enclosures

NSF Form 411 (10-83)

FORM APPROVED
OMB No. 3145-0015
Expiration Date: 7/31/84

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING EXPENDITURES AT UNIVERSITIES AND COLLEGES, FY 1983

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W., Room L-602
Washington, D.C. 20550
Attn: UNISG/R&D

This form should be returned by January 3, 1984. Your cooperation in returning the survey questionnaire promptly is very important.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical progams of your medical schools. **Exclude** data for federally funded research and development centers (FFRDC's). A separate questionnaire is included in this package if your institution administers an FFRDC. **If you have any questions please contact Judith Coakley or Marge Machen (202-634-4674).**

Please correct if name or address has changed

(Includes aggregate data from 562 universities and colleges but excludes 19 university-administered FFRDC's)

Financial data are requested for your institution's 1983 fiscal year.

Please circle the month in which your institution's fiscal year begins:
1 2 3 4 5 6 7 8 9 10 11 12

How many person hours were required to complete this form? ☐

Date Submitted _____

Scope:

This survey collects data on expenditures by universities and colleges for separately budgeted research and development (R&D) in science and engineering. Definitions used are compatible with OMB Circular A-21, revised July 23, 1982. Items 1 and 2 ask for *current fund expenditures* by source of funds and by field of science/engineering. Item 3 collects data on that *portion* of *current fund expenditures* reported in items 1 and 2 that went for the purchase of scientific and engineering research equipment. Item 4 collects data on capital expenditures for facilities and equipment for research, development, and instruction by source of funds and field of science/engineering.

Definitions:

1. ***Research and Development (R&D).*** R&D for purposes of this survey is the same as "organized research" as defined in Section B.1.b. of OMB Circular A-21 (revised). It includes all R&D activities of an institution that are *separately budgeted and accounted for.* R&D includes both "sponsored research" activities (sponsored by Federal and non-Federal agencies and organizations) and "university research" (separately budgeted under an internal application of institutional funds).
   a. ***Research*** is a systematic study directed toward fuller knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the investigator.
   b. ***Development*** is systematic use of the knowledge or understanding gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.
2. ***Current fund expenditures.*** Expenditures of funds available for current operations. Such expenditures include all unrestricted gifts and restricted current funds to the extent that such funds were expended for current operating purposes.
3. ***Capital expenditures*** (for facilities and equipment). A capital expenditure as defined in Section J.13 of OMB Circular A-21 (revised) means the cost of the asset including the cost to put it in place. "Equipment" as a capital expenditure means an article of nonexpendable tangible personal property having a useful life of more than two years and an acquisition cost of $500 or more per unit; lower limits may be established, consistent with institutional policy.

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	AREA CODE	EXCH.	NO.	EXT.

NAME OF PERSON WHO PREPARED THIS SUBMISSION (if different from above)	TITLE	AREA CODE	EXCH.	NO.	EXT.

Instructions for Items 1 and 2

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. *Include* research equipment purchased under research project awards from "current fund" accounts. Also, *include* research funds subcontracted to outside organizations. *Exclude* training grants, public service grants, demonstration projects, and departmental research expenditures that are not separately budgeted. Also, *exclude* any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

a. *Federal Government*. Report grants and contracts for R&D (including direct and reimbursed indirect costs) by all agencies of the Federal Government.

b. *State and local governments*. Include funds for R&D from State, county, municipal, or other local governments and their agencies. Include here State funds which support R&D at agricultural experiment stations.

c. *Industry*. Include all grants and contracts for R&D from profitmaking organizations, whether engaged in production, distribution, research, service, or other activities. Do not include grants and contracts from nonprofit foundations financed by industry; these should be reported under *All other sources* (line 1175).

d. *Institutional funds*. Report funds, including indirect costs, which your institution spent for R&D activities from the following sources: (1) General-purpose State or local government appropriations; (2) general-purpose grants from industry, foundations, or other outside sources; (3) tuition and fees; (4) endowment income. In addition, estimate your institution's contribution to unreimbursed indirect costs incurred in association with R&D projects financed by outside organizations, and mandatory cost sharing on Federal and other grants. To estimate unreimbursed indirect costs, many institutions use a university-wide negotiated indirect cost rate multiplied by the base (e.g., direct salaries and wages, etc.) minus actual indirect cost recoveries. If your institution now separately budgets what was previously classified as departmental research, these data should be included in line 1161.

e. *All other sources*. Include grants for R&D from nonprofit foundations and voluntary health agencies as well as from all other sources not elsewhere classified. Funds from foundations which are affiliated with, or granted solely to your institution, should be included under line 1160, Institutional funds. Funds for R&D received from a health agency that is a unit of a State or local government should be reported under State and local governments (line 1125). Also include gifts from individuals that are restricted by the donor to research.

ITEM 1. CURRENT FUND EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS, FY 1983 (Include indirect costs)

Source of funds		(1) Total (Dollars in thousands)	(2) Basic research (Percent of column 1)
a. Federal Government	1110	$ 4,959,603	71.2 %
*b. State and local governments	1125	599,041	**Basic research** is directed toward an increase of knowledge; it is research where the primary aim of the **investigator** is a fuller knowledge or understanding of the subject under study rather than a specific application thereof.
c. Industry	1150	370,168	
d. Institutional funds	1160	1,230,779	
(1) Separately budgeted	1161	639,189	
(2) Underrecovery of indirect costs and cost sharing	1162	591,590	
*e. All other sources	1175	585,363	
f. TOTAL (sum of a through e)	1100	$ 7,744,954	67.3 %

*Combined data cell (See instructions for b and e).

CONFIDENTIALITY

Information received from individual institutions in lines 1161 and 1162, or estimates for basic research expenditures, will **not** be published or released; only aggregate totals will appear in publications.

Total R&D expenditures reported in line 1100, column (1) and line 1400, column (1) should be the same.

Federally financed R&D expenditures reported in line 1110, column (1) and line 1400, column (2) should be the same.

ITEM 2. CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE/ENGINEERING: FY 1983 (Include indirect costs)*

Field of science/engineering		(Dollars in thousands) (1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1410		
(1) Aeronautical & astronautical	1411	65,011	52,173
(2) Chemical	1412	88,951	51,521
(3) Civil	1413	106,902	57,620
(4) Electrical	1414	257,300	191,968
(5) Mechanical	1415	147,542	100,439
(6) Other	1416	435,196	281,606
b. PHYSICAL SCIENCES (TOTAL)	1420		
(1) Astronomy	1421	74,300	50,439
(2) Chemistry	1422	335,853	248,990
(3) Physics	1423	407,333	340,658
(4) Other	1424	72,540	59,205
c. ENVIRONMENTAL SCIENCES (TOTAL)	1430		
(1) Atmospheric	1431	97,745	76,108
(2) Earth sciences	1432	212,999	134,332
(3) Oceanography	1433	224,749	171,456
(4) Other	1434	82,633	44,865
d. MATHEMATICAL AND COMPUTER SCIENCES (TOTAL)	1440		
(1) Mathematics	1441	101,347	75,256
(2) Computer sciences	1442	176,891	128,836
e. LIFE SCIENCES (TOTAL)	1450		
(1) Agricultural	1451	892,857	263,939
(2) Biological	1452	1,391,972	981,873
(3) Medical	1453	1,798,086	1,245,146
(4) Other	1454	126,764	77,556
f. PSYCHOLOGY (TOTAL)	1460		
g. SOCIAL SCIENCES (TOTAL)	1470		
(1) Economics	1471	94,698	37,651
(2) Political science	1472	55,272	20,034
(3) Sociology	1473	76,869	42,852
(4) Other	1474	118,673	48,282
h. OTHER SCIENCES, not elsewhere classified (TOTAL)	1480		
i. TOTAL (sum of a through h)	1400		

*PLEASE EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

ITEM 3. CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE/ENGINEERING: FY 1983* **(See page 5 for instructions.)**

Field of science/engineering		(Dollars in thousands) (1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1810	$ 73,171	$
(1) Aeronautical & astronautical	1811	2,837	2,100
(2) Chemical	1812	6,172	3,559
(3) Civil	1813	6,086	3,422
(4) Electrical	1814	20,685	14,516
(5) Mechanical	1815	10,008	6,563
(6) Other	1816	29,383	18,677
b. PHYSICAL SCIENCES (TOTAL)	1820		
(1) Astronomy	1821	4,243	3,465
(2) Chemistry	1822	32,826	23,632
(3) Physics	1823	35,673	29,588
(4) Other	1824	6,411	5,452
c. ENVIRONMENTAL SCIENCES (TOTAL)	1830		
(1) Atmospheric	1831	5,025	3,617
(2) Earth sciences	1832	11,584	6,609
(3) Oceanography	1833	10,928	6,837
(4) Other	1834	3,586	2,580
d. MATHEMATICAL AND COMPUTER SCIENCES (TOTAL)	1840		
(1) Mathematics	1841	2,668	1,476
(2) Computer sciences	1842	15,509	10,229
e. LIFE SCIENCES (TOTAL)	1850		
(1) Agricultural	1851	38,813	10,746
(2) Biological	1852	75,155	51,041
(3) Medical	1853	85,942	51,546
(4) Other	1854	6,677	4,009
f. PSYCHOLOGY (TOTAL)	1860		
g. SOCIAL SCIENCES (TOTAL)	1870		
(1) Economics	1871	1,911	728
(2) Political science	1872	767	319
(3) Sociology	1873	1,462	939
(4) Other	1874	4,798	926
h. OTHER SCIENCES, not elsewhere classified (TOTAL)	1880		
i. TOTAL (sum of a through h)	1800		

*Current fund expenditures in each field for scientific research equipment should be a subset of the "Total" and "Federal" column reported in item 2.

Item 3 Instructions

Please report that *portion* of current fund expenditures reported in items 1 and 2 that went for the purchase of research equipment. This includes all research equipment purchased under sponsored research project awards from current fund accounts.

NOTE: These research equipment expenditures are not to be included under capital expenditures reported in item 4.

For column (1) report current fund expenditures for R&D from all sources: Federal Government, State, county, municipal, or other governments and their agencies (including State funds supporting R&D at agricultural experiment stations); industry; institutional funds; and private foundations and voluntary health agencies, individuals, and associations.

For column (2) include funds from grants and contracts for R&D sponsored by agencies of the Federal Government.

Item 4 Instructions

Please report expenditures for facilities that were in process or completed during FY 1983.

Capital expenditures for facilities and equipment **include** the following: (a) Fixed equipment such as built-in equipment and furnishings; (b) movable scientific equipment such as oscilloscopes and pulse-height analyzers; (c) movable furnishings such as desks; (d) architect's fees, site work, extension of utilities, and the building costs of service functions such as integral cafeterias and bookstores of a facility; (e) facilities constructed to house separate components such as medical schools and teaching hospitals; and (f) special separate facilities used to house scientific apparatus such as accelerators, oceanographic vessels, and computers.

Expenditures for administration buildings, steam plants, residence halls, and other such facilities should be **excluded** unless used principally for research, development, or instruction in the sciences and engineering. Land costs should be **excluded. Also exclude** research equipment purchased under research project awards from current fund accounts that are reported under items 1, 2, and 3.

ITEM 4. CAPITAL EXPENDITURES FOR FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE/ENGINEERING AND SOURCE OF FUNDS: FY 1983

Field of science/engineering		(Dollars in thousands)		
		Total (1)	Federal (2)	All other sources (3)
a. Engineering	1710	$ 134,701	$ 16,565	$ 118,136
b. Physical sciences	1720	87,073	18,825	68,248
c. Environmental sciences	1730	41,254	3,704	37,550
d. Mathematical and computer sciences	1740	53,116	4,540	48,576
e. Life sciences	1750	666,163	81,850	584,313
f. Psychology	1760	17,359	1,627	15,732
g. Social sciences	1770	41,535	5,111	36,424
h. Other sciences, n.e.c.	1780	35,805	1,514	34,291
i. Total (sum of a through h)	1700	$1,077,006	$ 133,736	$ 943,270

ILLUSTRATIVE DISCIPLINES[1]

a. Engineering	
(1) Aeronautical & astronautical	Aerodynamics, aerospace, space technology
(2) Chemical	Petroleum, petroleum refining process
(3) Civil	Architectural, hydraulic, hydrologic, sanitary and environmental, structural transportation
(4) Electrical	Communication, electronic, power
(5) Mechanical	Engineering mechanics
(6) Other	Agricultural, ceramic, industrial and management, marine, metallurgical and materials, mining, nuclear, ocean engineering systems, textile, welding
b. Physical sciences	
(1) Astronomy	Astrophysics, optical and radio, x-ray, gamma-ray, neutrino
(2) Chemistry	Inorganic, organo-metallic, organic, physical, analytical, pharmaceutical, polymer sciences (exclude biochemistry)
(3) Physics	Acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma
(4) Other	Used for multidisciplinary projects within physical sciences and for disciplines not requested separately
c. Environmental sciences	
(1) Atmospheric	Aeronomy, solar, weather modification, extraterrestrial atmospheres, meteorology
(2) Earth sciences	Engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology
(3) Oceanography	Biological oceanography, chemical oceanography, geological oceanography, physical oceanography, marine geophysics
(4) Other	Used for multidisciplinary projects within environmental sciences
d. Mathematical and computer sciences	
(1) Mathematics	Algebra, analysis, applied mathematics, foundations and logic, geometry, numerical analysis, statistics, topology
(2) Computer sciences	Design, development, and application of computer capabilities to data storage and manipulation, information science
e. Life sciences	
(1) Agricultural	Agricultural chemistry, agronomy, animal science, conservation, dairy science, range science, wildlife
(2) Biological	Anatomy, biochemistry, biophysics, biogeography, ecology, embryology, entomology, genetics, immunology, microbiology, nutrition, parasitology, pathology, pharmacology, physical anthropology, physiology, plant science, botany, zoology, veterinary biology
(3) Medical	Anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics, ophthalmology, preventive medicine and community health, psychiatry, radiology, surgery, veterinary medicine,[2] dentistry, pharmacy
(4) Other	Used for multidisciplinary projects within life sciences
f. Psychology	Animal behavior, clinical, educational, experimental, human development and personality, social
g. Social sciences	
(1) Economics	Econometrics, international, industrial, labor, agricultural, public finance and fiscal policy
(2) Political science	Regional studies, comparative government, international relations, legal systems, political theory, public administration
(3) Sociology	Comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and welfare, theory
(4) Other	History of science, cultural anthropology, lingistics, socioeconomic geography
h. Other sciences, n.e.c.	To be used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible

[1]Also, see enclosed "Crosswalk" between NSF field of science/engineering codes and the NCES Classification of Instructional Programs (NCES 81-323).

[2]Institutions with schools of veterinary medicine should distribute R&D expenditures among the appropriate disciplines (agricultural, biological, and medical) rather than only in medical sciences.

NSF Form 411 (10-83)

FORM APPROVED
OMB No. 3145-0015
Expiration Date: 7/31/84

NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

SURVEY OF SCIENTIFIC AND ENGINEERING EXPENDITURES AT UNIVERSITIES AND COLLEGES, FY 1983

Organizations are requested to complete and return this form to:

NATIONAL SCIENCE FOUNDATION
1800 G Street, N.W., Room L-602
Washington, D.C. 20550
Attn: UNISG/R&D

This form should be returned by January 3, 1984. Your cooperation in returning the survey questionnaire promptly is very important.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Also include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical progams of your medical schools. **Exclude** data for federally funded research and development centers (FFRDC's). A separate questionnaire is included in this package if your institution administers an FFRDC. **If you have any questions please contact Judith Coakley or Marge Machen (202-634-4674).**

Please correct if name or address has changed

(Aggregate data from 19 university-administered FFRDC's)

Financial data are requested for your institution's 1983 fiscal year.

Please circle the month in which your institution's fiscal year begins:

1 2 3 4 5 6 7 8 9 10 11 12

How many person hours were required to complete this form? ☐

Date Submitted _____

Scope:

This survey collects data on expenditures by universities and colleges for separately budgeted research and development (R&D) in science and engineering. Definitions used are compatible with OMB Circular A-21, revised July 23, 1982. Items 1 and 2 ask for *current fund expenditures* by source of funds and by field of science/engineering. Item 3 collects data on that *portion* of *current fund expenditures* reported in items 1 and 2 that went for the purchase of scientific and engineering research equipment. Item 4 collects data on capital expenditures for facilities and equipment for research, development, and instruction by source of funds and field of science/engineering.

Definitions:

1. ***Research and Development*** **(R&D).** R&D for purposes of this survey is the same as "organized research" as defined in Section B.1.b. of OMB Circular A-21 (revised). It includes all R&D activities of an institution that are *separately budgeted and accounted for.* R&D includes both "sponsored research" activities (sponsored by Federal and non-Federal agencies and organizations) and "university research" (separately budgeted under an internal application of institutional funds).
   a. ***Research*** is a systematic study directed toward fuller knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the investigator.
   b. ***Development*** is systematic use of the knowledge or understanding gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.
2. ***Current fund expenditures.*** Expenditures of funds available for current operations. Such expenditures include all unrestricted gifts and restricted current funds to the extent that such funds were expended for current operating purposes.
3. ***Capital expenditures*** **(for facilities and equipment).** A capital expenditure as defined in Section J.13 of OMB Circular A-21 (revised) means the cost of the asset including the cost to put it in place. "Equipment" as a capital expenditure means an article of nonexpendable tangible personal property having a useful life of more than two years and an acquisition cost of $500 or more per unit; lower limits may be established, consistent with institutional policy.

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	AREA CODE	EXCH.	NO.	EXT.

NAME OF PERSON WHO PREPARED THIS SUBMISSION (if different from above)	TITLE	AREA CODE	EXCH.	NO.	EXT.

Instructions for Items 1 and 2

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. *Include* research equipment purchased under research project awards from "current fund" accounts. Also, *include* research funds subcontracted to outside organizations. *Exclude* training grants, public service grants, demonstration projects, and departmental research expenditures that are not separately budgeted. Also, *exclude* any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

a. *Federal Government*. Report grants and contracts for R&D (including direct and reimbursed indirect costs) by all agencies of the Federal Government.

b. *State and local governments*. Include funds for R&D from State, county, municipal, or other local governments and their agencies. Include here State funds which support R&D at agricultural experiment stations.

c. *Industry*. Include all grants and contracts for R&D from profitmaking organizations, whether engaged in production, distribution, research, service, or other activities. Do not include grants and contracts from nonprofit foundations financed by industry; these should be reported under *All other sources* (line 1175).

d. *Institutional funds*. Report funds, including indirect costs, which your institution spent for R&D activities from the following sources: (1) General-purpose State or local government appropriations; (2) general-purpose grants from industry, foundations, or other outside sources; (3) tuition and fees; (4) endowment income. In addition, estimate your institution's contribution to unreimbursed indirect costs incurred in association with R&D projects financed by outside organizations, and mandatory cost sharing on Federal and other grants. To estimate unreimbursed indirect costs, many institutions use a university-wide negotiated indirect cost rate multiplied by the base (e.g., direct salaries and wages, etc.) minus actual indirect cost recoveries. If your institution now separately budgets what was previously classified as departmental research, these data should be included in line 1161.

e. *All other sources*. Include grants for R&D from nonprofit foundations and voluntary health agencies as well as from all other sources not elsewhere classified. Funds from foundations which are affiliated with, or granted solely to your institution, should be included under line 1160, Institutional funds. Funds for R&D received from a health agency that is a unit of a State or local government should be reported under State and local governments (line 1125). Also include gifts from individuals that are restricted by the donor to research.

ITEM 1. CURRENT FUND EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS, FY 1983 (Include indirect costs)

Source of funds		(1) Total (Dollars in thousands)	(2) Basic research (Percent of column 1)
a. Federal Government	1110	$ 2,697,078	35.9 %
*b. State and local governments	1125	1,180	**Basic research** is directed toward an increase of knowledge; it is research where the primary aim of the **investigator** is a fuller knowledge or understanding of the subject under study rather than a specific application thereof.
c. Industry	1150	50	
d. Institutional funds	1160	2,157	
(1) Separately budgeted	1161	1,602	
(2) Underrecovery of indirect costs and cost sharing	1162	555	
*e. All other sources	1175	35,187	
f. TOTAL (sum of a through e)	1100	$ 2,736,652	35.9 %

*Combined data cell (See instructions for b and e).

CONFIDENTIALITY

Information received from individual institutions in lines 1161 and 1162, or estimates for basic research expenditures, will **not** be published or released; only aggregate totals will appear in publications.

Total R&D expenditures reported in line 1100, column (1) and line 1400, column (1) should be the same.

Federally financed R&D expenditures reported in line 1110, column (1) and line 1400, column (2) should be the same.

ITEM 2. CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE/ENGINEERING: FY 1983 (Include indirect costs)*

Field of science/engineering		(Dollars in thousands) (1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1410		
(1) Aeronautical & astronautical	1411	69,057	68,958
(2) Chemical	1412	45,832	45,197
(3) Civil	1413	13,378	13,112
(4) Electrical	1414	316,652	313,091
(5) Mechanical	1415	339,573	333,976
(6) Other	1416	160,460	158,149
b. PHYSICAL SCIENCES (TOTAL)	1420		
(1) Astronomy	1421	73,498	73,265
(2) Chemistry	1422	200,505	196,988
(3) Physics	1423	885,500	873,316
(4) Other	1424	36,954	36,443
c. ENVIRONMENTAL SCIENCES (TOTAL)	1430		
(1) Atmospheric	1431	56,749	51,069
(2) Earth sciences	1432	37,795	37,039
(3) Oceanography	1433	13,068	13,068
(4) Other	1434	47,030	46,072
d. MATHEMATICAL AND COMPUTER SCIENCES (TOTAL)	1440		
(1) Mathematics	1441	65,340	64,174
(2) Computer sciences	1442	224,274	223,227
e. LIFE SCIENCES (TOTAL)	1450		
(1) Agricultural	1451	1,008	1,008
(2) Biological	1452	76,437	74,924
(3) Medical	1453	9,555	9,471
(4) Other	1454	17,484	17,065
f. PSYCHOLOGY (TOTAL)	1460		
g. SOCIAL SCIENCES (TOTAL)	1470		
(1) Economics	1471	4,254	3,786
(2) Political science	1472	3,955	3,880
(3) Sociology	1473	0	0
(4) Other	1474	12,858	12,530
h. OTHER SCIENCES, not elsewhere classified (TOTAL)	1480		
i. TOTAL (sum of a through h)	1400		

*PLEASE EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other nonscience fields.

ITEM 3. CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE/ENGINEERING: FY 1983*
(See page 5 for instructions.)

Field of science/engineering		(Dollars in thousands) (1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1810		
(1) Aeronautical & astronautical	1811	4,183	4,183
(2) Chemical	1812	2,306	2,306
(3) Civil	1813	755	755
(4) Electrical	1814	11,970	11,970
(5) Mechanical	1815	18,158	18,158
(6) Other	1816	6,833	6,833
b. PHYSICAL SCIENCES (TOTAL)	1820		
(1) Astronomy	1821	5,762	5,762
(2) Chemistry	1822	13,016	12,633
(3) Physics	1823	68,808	67,250
(4) Other	1824	2,366	2,366
c. ENVIRONMENTAL SCIENCES (TOTAL)	1830		
(1) Atmospheric	1831	5,587	5,587
(2) Earth sciences	1832	2,004	2,004
(3) Oceanography	1833	695	695
(4) Other	1834	2,375	2,375
d. MATHEMATICAL AND COMPUTER SCIENCES (TOTAL)	1840		
(1) Mathematics	1841	3,412	3,412
(2) Computer sciences	1842	12,575	12,575
e. LIFE SCIENCES (TOTAL)	1850		
(1) Agricultural	1851	76	76
(2) Biological	1852	4,341	4,341
(3) Medical	1853	281	281
(4) Other	1854	1,142	1,142
f. PSYCHOLOGY (TOTAL)	1860		
g. SOCIAL SCIENCES (TOTAL)	1870		
(1) Economics	1871	33	33
(2) Political science	1872	197	197
(3) Sociology	1873	0	0
(4) Other	1874	862	862
h. OTHER SCIENCES, not elsewhere classified (TOTAL)	1880		
i. TOTAL (sum of a through h)	1800		

*Current fund expenditures in each field for scientific research equipment should be a subset of the "Total" and "Federal" column reported in item 2.

Item 3 Instructions

Please report that *portion* of current fund expenditures reported in items 1 and 2 that went for the purchase of research equipment. This includes all research equipment purchased under sponsored research project awards from current fund accounts.

NOTE: These research equipment expenditures are not to be included under capital expenditures reported in item 4.

For column (1) report current fund expenditures for R&D from all sources: Federal Government, State, county, municipal, or other governments and their agencies (including State funds supporting R&D at agricultural experiment stations); industry; institutional funds; and private foundations and voluntary health agencies, individuals, and associations.

For column (2) include funds from grants and contracts for R&D sponsored by agencies of the Federal Government.

Item 4 Instructions

Please report expenditures for facilities that were in process or completed during FY 1983.

Capital expenditures for facilities and equipment **include** the following: (a) Fixed equipment such as built-in equipment and furnishings; (b) movable scientific equipment such as oscilloscopes and pulse-height analyzers; (c) movable furnishings such as desks; (d) architect's fees, site work, extension of utilities, and the building costs of service functions such as integral cafeterias and bookstores of a facility; (e) facilities constructed to house separate components such as medical schools and teaching hospitals; and (f) special separate facilities used to house scientific apparatus such as accelerators, oceanographic vessels, and computers.

Expenditures for administration buildings, steam plants, residence halls, and other such facilities should be **excluded** unless used principally for research, development, or instruction in the sciences and engineering. Land costs should be **excluded. Also exclude** research equipment purchased under research project awards from current fund accounts that are reported under items 1, 2, and 3.

ITEM 4. CAPITAL EXPENDITURES FOR FACILITIES AND EQUIPMENT FOR RESEARCH, DEVELOPMENT, AND INSTRUCTION, BY FIELD OF SCIENCE/ENGINEERING AND SOURCE OF FUNDS: FY 1983

Field of science/engineering		(Dollars in thousands)		
		Total (1)	Federal (2)	All other sources (3)
a. Engineering	1710	$ 65,263	$ 65,263	$ 0
b. Physical sciences	1720	209,154	209,154	0
c. Environmental sciences	1730	7,519	7,519	0
d. Mathematical and computer sciences	1740	15,641	15,641	0
e. Life sciences	1750	4,638	4,638	0
f. Psychology	1760	0	0	0
g. Social sciences	1770	1,016	1,016	0
h. Other sciences, n.e.c.	1780	556	556	0
i. Total (sum of a through h)	1700	$ 303,787	$ 303,787	$ 0

ILLUSTRATIVE DISCIPLINES[1]

a. Engineering	
(1) Aeronautical & astronautical	Aerodynamics, aerospace, space technology
(2) Chemical	Petroleum, petroleum refining process
(3) Civil	Architectural, hydraulic, hydrologic, sanitary and environmental, structural transportation
(4) Electrical	Communication, electronic, power
(5) Mechanical	Engineering mechanics
(6) Other	Agricultural, ceramic, industrial and management, marine, metallurgical and materials, mining, nuclear, ocean engineering systems, textile, welding
b. Physical sciences	
(1) Astronomy	Astrophysics, optical and radio, x-ray, gamma-ray, neutrino
(2) Chemistry	Inorganic, organo-metallic, organic, physical, analytical, pharmaceutical, polymer sciences (exclude biochemistry)
(3) Physics	Acoustics, atomic and molecular, condensed matter, elementary particles, nuclear structure, optics, plasma
(4) Other	Used for multidisciplinary projects within physical sciences and for disciplines not requested separately
c. Environmental sciences	
(1) Atmospheric	Aeronomy, solar, weather modification, extraterrestrial atmospheres, meteorology
(2) Earth sciences	Engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic geochemistry, isotopic geochemistry, organic geochemistry, lab geophysics, paleomagnetism, paleontology, physical geography and cartography, seismology
(3) Oceanography	Biological oceanography, chemical oceanography, geological oceanography, physical oceanography, marine geophysics
(4) Other	Used for multidisciplinary projects within environmental sciences
d. Mathematical and computer sciences	
(1) Mathematics	Algebra, analysis, applied mathematics, foundations and logic, geometry, numerical analysis, statistics, topology
(2) Computer sciences	Design, development, and application of computer capabilities to data storage and manipulation, information science
e. Life sciences	
(1) Agricultural	Agricultural chemistry, agronomy, animal science, conservation, dairy science, range science, wildlife
(2) Biological	Anatomy, biochemistry, biophysics, biogeography, ecology, embryology, entomology, genetics, immunology, microbiology, nutrition, parasitology, pathology, pharmacology, physical anthropology, physiology, plant science, botany, zoology, veterinary biology
(3) Medical	Anesthesiology, cardiology, endocrinology, gastroenterology, hematology, neurology, obstetrics, ophthalmology, preventive medicine and community health, psychiatry, radiology, surgery, veterinary medicine,[2] dentistry, pharmacy
(4) Other	Used for multidisciplinary projects within life sciences
f. Psychology	Animal behavior, clinical, educational, experimental, human development and personality, social
g. Social sciences	
(1) Economics	Econometrics, international, industrial, labor, agricultural, public finance and fiscal policy
(2) Political science	Regional studies, comparative government, international relations, legal systems, political theory, public administration
(3) Sociology	Comparative and historical, complex organizations, culture and social structure, demography, group interactions, social problems and welfare, theory
(4) Other	History of science, cultural anthropology, lingistics, socioeconomic geography
h. Other sciences, n.e.c.	To be used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible

[1]Also, see enclosed "Crosswalk" between NSF field of science/engineering codes and the NCES Classification of Instructional Programs (NCES 81-323).

[2]Institutions with schools of veterinary medicine should distribute R&D expenditures among the appropriate disciplines (agricultural, biological, and medical) rather than only in medical sciences.

CROSSWALK BETWEEN NSF FIELD OF SCIENCE/ENGINEERING CODES AND THE NCES CLASSIFICATION OF INSTRUCTIONAL PROGRAMS

SAMPLE LISTING:

Last 2 digits of line code on NSF questionnaire → 33

NSF Field Description: OCEANOGRAPHY

NCES Codes	NCES Field Description	
26.0607	MARINE BIOLOGY	NCES fields which are included within the preceding NSF category
40.0702	OCEANOGRAPHY	

10 ENGINEERING, TOTAL

11 AEROSPACE
- 14.02 AEROSPACE, AERONAUTICAL, AND ASTRONAUTICAL ENGINEERING

12 CHEMICAL
- 03.0406 PULP AND PAPER PRODUCTION
- 03.0509 WOOD SCIENCE
- 14.07 CHEMICAL ENGINEERING
- 14.25 PETROLEUM ENGINEERING

13 CIVIL
- 04.02 ARCHITECTURE
- 14.04 ARCHITECTURAL ENGINEERING
- 14.08 CIVIL ENGINEERING
- 14.14 ENVIRONMENTAL HEALTH ENGINEERING

14 ELECTRICAL
- 14.09 COMPUTER ENGINEERING
- 14.10 ELECTRICAL, ELECTRONICS, AND COMMUNICATIONS ENGINEERING

15 MECHANICAL
- 14.11 ENGINEERING MECHANICS
- 14.19 MECHANICAL ENGINEERING

16 OTHER ENGINEERING
- 14.01 ENGINEERING, GENERAL
- 14.03 AGRICULTURAL ENGINEERING
- 14.05 BIOENGINEERING AND BIOMEDICAL ENGINEERING
- 14.06 CERAMIC ENGINEERING
- 14.12 ENGINEERING PHYSICS
- 14.13 ENGINEERING SCIENCE
- 14.15 GEOLOGICAL ENGINEERING
- 14.16 GEOPHYSICAL ENGINEERING
- 14.17 INDUSTRIAL ENGINEERING
- 14.18 MATERIALS ENGINEERING
- 14.20 METALLURGICAL ENGINEERING
- 14.21 MINING AND MINERAL ENGINEERING
- 14.22 NAVAL ARCHITECTURE & MARINE ENGINEERING
- 14.23 NUCLEAR ENGINEERING
- 14.24 OCEAN ENGINEERING
- 14.27 SYSTEMS ENGINEERING
- 14.28 TEXTILE ENGINEERING
- 14.99 ENGINEERING, OTHER
- 19.0901 TEXTILE AND CLOTHING
- 30.03 ENGINEERING & OTHER DISCIPLINES
- 30.06 SYSTEMS SCIENCE
- 40.0701 METALLURGY

20 PHYSICAL SCIENCES, TOTAL

21 ASTRONOMY
- 40.02 ASTRONOMY
- 40.03 ASTROPHYSICS
- 40.09 PLANETARY SCIENCE

22 CHEMISTRY
- 40.05 CHEMISTRY

23 PHYSICS
- 40.08 PHYSICS

24 OTHER PHYSICAL SCIENCES
- 40.0799 MISCELLANEOUS PHYSICAL SCIENCE, OTHER
- 40.01 PHYSICAL SCIENCES, GENERAL
- 40.99 PHYSICAL SCIENCES, OTHER

30 ENVIRONMENTAL SCIENCES, TOTAL

31 ATMOSPHERIC
- 40.04 ATMOSPHERIC SCIENCE & METEOROLOGY

32 EARTH
- 40.06 GEOLOGICAL SCIENCES

33 OCEANOGRAPHY
- 26.0607 MARINE BIOLOGY
- 40.0702 OCEANOGRAPHY

34 OTHER ENVIRONMENTAL SCIENCES

40 MATHEMATICAL/COMPUTER SCIENCES, TOTAL

41 MATHEMATICS
- 06.1302 OPERATIONS RESEARCH (QUANTITATIVE METHODS)
- 27 MATHEMATICS

42 COMPUTER SCIENCE
- 06.12 MANAGEMENT INFORMATION SYSTEMS
- 11 COMPUTER & INFORMATION SCIENCE, GENERAL

49 MATHEMATICAL SCIENCE, OTHER

50 LIFE SCIENCES, TOTAL

51 AGRICULTURAL
- 01.03 AGRICULTURAL PRODUCTION
- 01.0303 AQUACULTURE
- 01.07 INTERNATIONAL AGRICULTURE
- 02 AGRICULTURAL SCIENCES
- 03 RENEWABLE NATURAL RESOURCES
- 04.06 LANDSCAPE ARCHITECTURE

52 BIOLOGICAL

18.0201	CLINICAL ANATOMY
18.0202	CLINICAL BIOCHEMISTRY
18.0203	CLINICAL MICROBIOLOGY
18.0204	CLINICAL PATHOLOGY
18.0205	PHYSIOLOGY
18.06	EPIDEMIOLOGY
18.1002	ALLERGIES AND ENDOMCLOGY
18.1009	IMMUNOLOGY
18.1018	PATHOLOGY
18.23	TOXICOLOGY (CLINICAL)
19.05	FOOD SCIENCE & HUMAN NUTRITION
20.0108	FOOD AND NUTRITION
26.0302	BACTERIOLOGY
26.0601	ANATOMY
26.0602	BIOMETRICS AND BIOSTATISTICS
26.0603	ECOLOGY
26.0604	EMBRYOLOGY
26.0606	HISTOLOGY
26.0609	NUTRITIONAL SCIENCES
26.0610	PARASITOLOGY
26.0612	TOXICOLOGY
26.0699	MISCELLANEOUS SPECIALIZED AREAS/ LIFE SCIENCE/OTHER
26.0701	ZOOLOGY
26.0702	ENTOMOLOGY
26.0703	GENETICS, HUMAN AND ANIMAL
26.0704	PATHOLOGY, HUMAN AND ANIMAL
26.0705	PHARMACOLOGY, HUMAN AND ANIMAL
26.0706	PHYSIOLOGY, HUMAN AND ANIMAL
26.0799	ZOOLOGY, OTHER
26.01	BIOLOGY, GENERAL
26.02	BIOCHEMISTRY AND BIOPHYSICS
26.03	BOTANY
26.04	CELL AND MOLECULAR BIOLOGY
26.05	MICROBIOLOGY
42.14	PSYCHOPHARMACOLOGY
26.99	LIFE SCIENCES, OTHER

53 MEDICAL

18.0299	BASIC CLINICAL HEALTH SCIENCES, OTHER
18.04	DENTISTRY
18.08	HEMATOLOGY
18.1001	MEDICINE, GENERAL
18.1003	ANESTHESIOLOGY
18.1004	COLON AND RECTAL SURGERY
18.1005	DERMATOLOGY
18.1007	FAMILY PRACTICE
18.1008	GERIATRICS
18.1010	INTERNAL MEDICINE
18.1011	NEUROLOGICAL SURGERY
18.1012	NUCLEAR MEDICINE
18.1013	OBSTETRICS AND GYNECOLOGY
18.1014	OPHTHALMOLOGY
18.1015	ORTHODONTIC SURGERY
18.1016	ORTHOPEDIC
18.1017	OTORHINOLARYNGOLOGY/ OTOLARYNGOLOGY
18.1019	PEDIATRICS
18.1020	PHYSICAL MEDICINE & REHABILITATION
18.1021	PLASTIC SURGERY
18.1022	PREVENTIVE MEDICINE
18.1023	PSYCHIATRY
18.1024	NEUROLOGY
18.1025	RADIOLOGY
18.1026	SURGERY
18.1027	THORACIC SURGERY
18.1028	UROLOGY
18.1099	MEDICINE, OTHER
18.1106	PSYCHIATRY/MENTAL HEALTH
18.12	OPTOMETRY
18.13	OSTEOPATHIC MEDICINE
18.14	PHARMACY
18.15	PODIATRY
18.24	VETERINARY MEDICINE
20.0102	CHILD DEVELOPMENT CARE AND GUIDANCE
26.0605	ENDOCRINOLOGY
26.0608	NEUROSCIENCES
26.0611	RADIOBIOLOGY

54 OTHER LIFE SCIENCES

17.0807	OCCUPATIONAL THERAPY
17.0813	PHYSICAL THERAPY
17.0821	SPEECH-LANGUAGE PATH/AUDIOLOGY
17.0899	REHABILITATION SERVICES, OTHER
17.99	ALLIED HEALTH, OTHER
18.01	AUDIOLOGY AND SPEECH PATHOLOGY
18.07	HEALTH SCIENCES ADMINISTRATION
18.09	MEDICAL LABORATORY
18.11	NURSING
18.22	PUBLIC HEALTH LABORATORY SCIENCE
18.99	HEALTH SCIENCES, OTHER

60 PSYCHOLOGY

13.08	SCHOOL PSYCHOLOGY
17.0801	ART THERAPY
42	PSYCHOLOGY

70 SOCIAL SCIENCES, TOTAL

71 ECONOMICS

01.0103	AGRICULTURAL ECONOMICS
06.05	BUSINESS ECONOMICS
45.06	ECONOMICS

72 POLITICAL SCIENCE

44.01	PUBLIC AFFAIRS, GENERAL
44.03	INTERNATIONAL PUBLIC SERVICE
44.04	PUBLIC ADMINISTRATION
44.99	PUBLIC AFFAIRS, GENERAL
44.05	PUBLIC POLICY STUDIES
45.09	INTERNATIONAL RELATIONS
45.10	POLITICAL SCIENCE & GOVERNMENT

73 SOCIOLOGY

18.16	POPULATION & FAMILY PLANNING
45.05	DEMOGRAPHY
45.11	SOCIOLOGY

74 OTHER SOCIAL SCIENCES

04.03	CITY, COMMUNITY & REG/PLANNING
05	AREAS AND ETHNIC STUDIES
06.06	HUMAN RESOURCES DEVELOPMENT
06.15	ORGANIZATIONAL BEHAVIOR
14.26	SURVEYING & MAPPING SCIENCES
42.12	PSYCHOLINGUISTICS
43.01	CRIMINAL JUSTICE
44.02	COMMUNITY SERVICES
44.07	SOCIAL WORK
45.01	SOCIAL SCIENCES, GENERAL
45.02	ANTHROPOLOGY
45.03	ARCHEOLOGY
45.04	CRIMINOLOGY
45.07	GEOGRAPHY
45.12	URBAN STUDIES
45.99	SOCIAL SCIENCES, OTHER

80 OTHER SCIENCES, TOTAL (not elsewhere classified)

other science resources publications

Science Resources Studies Highlights

R&D Funds

	NSF No.	Price
"7% Real Growth Expected in 1985 National R&D Expenditures: Defense and Space Major Factors"	85-304	-----
"Defense and Space Emphasized in 1985 Budget"	84-333	-----
"Real Growth in Federal R&D Funds Estimated at 12% in 1984--Largest Increase Since Midsixties"	84-302	-----
"Dollar Value of U.S. R&D Expenditures Overseas Declined in 1982"	83-329	-----
"Companies Plan Increases in R&D Spending Through 1984"	83-327	-----

S/E Personnel

"Ph. D. Scientists and Engineers Shift to Industrial Employment and Related Activities"	85-301	-----
"Science and Engineering Jobs Grew Twice as Fast as Overall U.S. Employment With Industry Taking the Lead"	84-319	-----
"1982 Job Market for New Science and Engineering Graduates About the Same as That of Previous Years"	84-310	-----
"Industry Reports Shortages of Scientists and Engineers Down Substantially From 1982 to 1983"	84-303	-----
"1982 Doctorate Production Stable in Science and Engineering Fields, But Down in Science and Mathematics Education"	83-330	-----
"No Change in Science and Engineering Student Quality Seen by 60% of Academic Officials: At Least 25% Perceive Improvement"	83-322	-----
"Growth in Neuroscience May Be Leveling Off"	83-314	

Detailed Statistical Tables

R&D Funds

Federal Funds for Research and Development, Fiscal Years 1983, 1984, and 1985, Volume XXXIII	84-336	-----
Research and Development in Industry, 1982. Funds, 1982; Scientists and Engineers, January 1983	84-325	-----

S/E Personnel

U.S. Scientists and Engineers: 1982, Volume 2	85-307	In press
Characteristics of Doctoral Scientists and Engineers in the United States: 1983	85-303	-----
The 1982 Postcensal Survey of Scientists and Engineers	84-330	-----
U.S. Scientists and Engineers: 1982, Volume 1	84-321	-----
Characteristics of Recent Science/ Engineering Graduates: 1982	84-318	-----
Science and Engineering Doctorates: 1960-82	83-328	-----
Scientists, Engineers, and Technicians in Manufacturing and Nonmanufacturing Industries: 1980-81	83-324	-----

Reports

R&D Funds

A Comparative Analysis of Information on National Industrial R&D Expenditures	85-311	In press
Federal Funds for Research and Development, Fiscal Years 1982, 1983, and 1984, Volume XXXII	84-326	-----
Federal R&D Funding by Budget Function: Fiscal Years 1983-85	84-316	-----
Trends to 1982 in Industrial Basic Research	83-302	$3.50
Federal R&D Funding for Energy: Fiscal Years 1971-83	83-301	-----
1990 R&D Funding Projections	82-315	$3.50

S/E Personnel

Projected Response of the Science, Engineering, and Technical Labor Market to Defense and Non-Defense Needs: 1982-87	84-304	-----
Women and Minorities in Science and Engineering	84-300	-----

Composite

Science and Engineering Personnel: A National Overview	85-302	In press
Science and Technology Data Book	84-331	-----
National Patterns of Science and Technology Resources, 1984	84-311	$5.00

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